



FOLIA MEDICA INDONESIA

 [UNIVERSITAS AIRLANGGA](#)

✦ [P-ISSN : 23558393](#) <> [E-ISSN : 2599056X](#) 📁 [Subject Area : Education](#)



0.5

Impact Factor



1010

Google Citations



Sinta 2

Current Accreditation

 [Google Scholar](#)  [Garuda](#)  [Website](#)  [Editor URL](#)

History Accreditation

2018 2020 2021 2022 2023 2024 2025

[Garuda](#) [Google Scholar](#)

[Longer Lag Time in Early-Stage Retinoblastoma](#)

Faculty of Medicine, Universitas Airlangga  [Folia Medica Indonesiana Vol. 58 No. 2 \(2022\): June 103-107](#)

 2022  [DOI: 10.20473/fmi.v58i2.24975](#)  [Accred : Sinta 2](#)

[The AKT Pathway and Satellite Cell Activation in Skeletal Muscle Mass Regulation](#)

Faculty of Medicine, Universitas Airlangga  [Folia Medica Indonesiana Vol. 58 No. 1 \(2022\): March 68-73](#)

 2022  [DOI: 10.20473/fmi.v58i1.13354](#)  [Accred : Sinta 2](#)

[Viral Load And Cd4+ among Hiv/Aids Patients Receiving Antiretroviral Therapy In Jayawijaya District, Papua Province, Indonesia](#)

Faculty of Medicine, Universitas Airlangga  [Folia Medica Indonesiana Vol. 58 No. 1 \(2022\): March 10-14](#)

 2022  [DOI: 10.20473/fmi.v58i1.18247](#)  [Accred : Sinta 2](#)

[Back Matter Vol.58 No.1 March 2022](#)

Faculty of Medicine, Universitas Airlangga  [Folia Medica Indonesiana Vol. 58 No. 1 \(2022\): March](#)

 2022  [DOI: 10.20473/fmi.v58i1.34145](#)  [Accred : Sinta 2](#)

[Acute Diarrhea Patients among Children Under Five Hospitalized in a Tertiary Hospital in East Java, Indonesia](#)

Faculty of Medicine, Universitas Airlangga  [Folia Medica Indonesiana Vol. 58 No. 1 \(2022\): March 33-38](#)



Vol. 58 No. 2 June 2022

- Pulmonary Physical Disorders in Marble Home Industry
- Perception of Exile Women Giving Birth in the Forest
- Timeliness of Hepatitis B Birth Dose Vaccine
- Cognitive, Motor, and Language Assessment in Children
- Patient Satisfaction and Perception-Expectation Gap in a Tertiary Hospital

Published by:
Faculty of Medicine, Universitas Airlangga
<https://e-journal.unair.ac.id/FMI>

FOLIA MEDICA INDONESIA

p-ISSN 2355-8393, e-ISSN 2599-056X

Vol. 58 No. 2 June 2022

Medical journal, published by Faculty of Medicine, Universitas Airlangga, Surabaya publishing original basic medical and clinical articles presented as research articles, case reports, and systematic review.

EDITOR-IN CHIEF

Kuntaman Kuntaman, Department of Medical Microbiology, Faculty of Medicine, Universitas Airlangga; Indonesian Society for Clinical Microbiology, Indonesia

ASSOCIATE EDITOR

Viskasari Pintoko Kalanjati, Department of Anatomy, Histology, and Pharmacology, Faculty of Medicine, Universitas Airlangga; International Federation of Associations of Anatomists (IFAA), Indonesia

EDITORIAL BOARD

- Muhammad Miftahussurur**, Universitas Airlangga, Indonesia; Baylor College Medicine, Houston, US
Yoshio Yamaoka, Oita University, Japan
Anucha Thatrimontrichai, Prince of Songkla University, Thailand Surasak Sangkhathat, Pediatric Surgery Unit, Department of Surgery, Prince of Songkla University, Songkhla, Thailand, Thailand
Purwo Sri Rejeki, Department of Physiology and Biochemistry, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia
Delvac Oceandy, University of Manchester, Manchester, United Kingdom
Aryati Aryati, PDS PATKLIN, Indonesia
Andrew Smith, United Kingdom
Franco Servadei, Department of Neurosurgery, Humanitas University, Italy
Maarten J Postma, Faculty of Science, Swammerdam Institute for Life Sciences, University of Amsterdam, Netherlands
Dirk Jan Marie de Ridder, Department of Development and Regeneration, Katholieke Universiteit Leuven, Belgium
Horie Shigeo, Department of Urology, Faculty of Medicine, Juntendo University, Japan
Yusuke Suzuki, Department of Nephrology, Faculty of Medicine, Juntendo University, Japan
Hiroaki Kimura, Department of Physical Medicine and Rehabilitation, Hiroshima University Hospital, Japan
Arend Frederik Bos, Division of Neonatology, Faculty of Medical Sciences, University of Groningen, Netherlands
Bambang Purwanto, Department of Medical Physiology, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia
Azimatul Karimah, Dr. Soetomo General Academic Hospital, Surabaya, Indonesia
Lucky Prasetiowati, PAAI, Indonesia
Reny Itishom, Department of Biomedical Sciences, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia
Christianto Lumenta, Bogenhausen Academic Teaching Hospital, Technical University, Munich, Germany
Irwanto Irwanto, Dr. Soetomo General Academic Hospital, Surabaya, Indonesia
Jitti Hanprasertpong, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Faculty of Medicine, Prince of Songkla University, Hat Yai, Songkhla, Thailand
Surasak Sangkhathat, Pediatric Surgery Unit, Department of Surgery, Prince of Songkla University, Songkhla, Thailand
Asra Al Fauzi, PERSPEBSI (Perhimpunan Spesialis Bedah Saraf Indonesia- INS), Indonesia; Surabaya Neuroscience Institute (SNeI), Indonesia
Brahmaputra Marjadi, Western Sydney University, Penrith, Australia
Wihasto Suryaningtyas, PERSPEBSI, Indonesia; Dr. Soetomo General Academic Hospital, Indonesia, Indonesia
Siti Khaerunnisa, Department of Physiology and Biochemistry, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

PRODUCTION EDITORS

- Achmad Naufal Irsyadi**, Unit Konsorsium Jurnal dan Folia Medica Indonesiana, Indonesia
Alfiananda Dwi Oktora Nugraheni, Unit Konsorsium Jurnal dan Folia Medica Indonesiana, Indonesia

Published by : Faculty of Medicine, Universitas Airlangga
 Quarterly (March, June, September, and December)
 Address : Unit Konsorsium Jurnal dan FMI
 Faculty of Medicine, Universitas Airlangga
 Jl. Prof dr Moestopo 47 Surabaya 60131, Indonesia
 Phone: 62-31-5020251-3 ext. 1199
 Fax : 62-31-5022472
 Email: fmi@journal.unair.ac.id, foliamedica@gmail.com

Accredited No. 158/E/KPT/2021

FOLIA MEDICA INDONESIA

p-ISSN 2355-8393, e-ISSN 2599-056X

Vol. 58 No. 2 June 2022

Original Research:	
LONGER LAG TIME IN EARLY-STAGE RETINOBLASTOMA (Anindya Citra, Budi Utomo, Hendrian Dwikoloso Soebagio)	103 – 107
THE EFFECT OF DICLOFENAC SODIUM ON CALLUS FORMATION IN WHITE MALE RAT (<i>Rattus norvegicus</i>) CRURIS FRACTURE HEALING (Herry Wibowo, Prihartini Widiyanti)	108 – 112
RESPIRABLE DUST LEVELS, YEARS OF SERVICE, AND PULMONARY PHYSIOLOGICAL DISORDERS IN MARBLE HOME INDUSTRY WORKERS (Siti Arum Alia, Noeroel Widajati, Tri Martiana, Firda Qurba Sari, Abdul Rohim Tualeka)	113 – 116
PERCEPTIONS OF WOMEN'S EXPOSURE TO BIRTH IN THE FOREST- A CROSS-SECTIONAL STUDY ON YEI TRIBE, MERAUKE REGENCY, INDONESIA (Andiyan, Fenita Purnama Sari Indah, Riris Andriati, Ika Rohmawati, Rina Kartikasari, Dini Rachmaniah)	117 – 121
COMBINATION OF NLCR AND PLR ENHANCE THE SEPSIS-3 STRATEGY (Emmy Hermiyanti Pranggono, Endah Nurul Aini, Adhi Kristianto Sugianli, Uun Sumardi, Yovita Hartantri)	122 – 128
FACTORS ASSOCIATED WITH TIMELINESS OF HEPATITIS B BIRTH DOSE: A CROSS-SECTIONAL STUDY IN NORTH-WESTERN NIGERIA (Olayinka Rasheed Ibrahim, Rasheedat Mobolaji Ibraheem, Rasaki Aliu, Ibrahim Magaji Lawal)	129 – 136
8-HYDROXYDEOXYGUANOSINE URINE WITH TOTAL NITRIC OXIDE SERUM IN CHRONIC KIDNEY DISEASE (Putri Aliya Ahadini, Mochammad Thaha, Arifa Mustika)	137 – 140
MANAGING HUMAN RESOURCES FOR SURGE CAPACITY IN REFERRAL HOSPITALS BASED ON WHO HOSPITAL READINESS CHECKLIST FOR COVID-19 (Fitri Dinia, Mochamat Helmi, Laksono Trisnantoro)	141 – 149
A FIRST STEP TO NOVEL APPROACH FOR TREATING ALKALI INJURY OF THE CORNEA: EFFECT OF PLATELET RICH FIBRIN LYSATES ON CULTURED RABBIT (<i>Oryctolagus cuniculus</i>) LIMBAL STEM CELL PROLIFERATION EXPOSED TO SODIUM HYDROXIDE (Wahyu Endah Prabawati, Gatut Suhendro, Endang Retnowati)	150 – 155
ELEVATED SERUM TRANSAMINASE (SGOT/SGPT) AND SEPSIS IN BURN PATIENTS IN A TERTIARY HOSPITAL, SURABAYA, INDONESIA (Iswinarno Doso Saputro, Lobredia Zarasade, Rifqi Kurniawan)	156 – 161
COGNITIVE, MOTOR, AND LANGUAGE ASSESSMENT IN CHILDREN WITH HUMAN IMMUNODEFICIENCY VIRUS (Putu Indah Budiapsari, I Nyoman Supadma, Ketut Dewi Kumara Wati, I Wayan Dharma Artana)	162 – 167
HYPERGLYCEMIA PREVALENCE AMONG ARTISANS AND WORKERS IN SELECTED FACTORIES IN LAGOS, SOUTHWEST, NIGERIA (Tajudeen Olanrewaju Yahaya, Mutiu O Sifau, Esther O Oladele, Aminu L. Abubakar, Danlami M Bashar, Naziru Salisu, Bello M Usman, Jamilu D Koko)	168 – 177
PATIENT SATISFACTION, PERCEPTION-EXPECTATION GAP, AND CUSTOMER SATISFACTION INDEX IN ANNUAL SURVEY 2021 AT DR. SOETOMO GENERAL ACADEMIC HOSPITAL, INDONESIA (Cita Rosita Sigit Prakoeswa, Nur Hidayah, Arlina Dewi, Indah Purnamasari, Agus Aan Adriansyah, Amak M. Yaqub)	178 – 186
Case Report:	
EXCISION OF RECURRENT HEMANGIOMA IN HAND WITH RECONSTRUCTION USING ABDOMINAL FLAP (Ivan J Mangara Tua, Andi M Ardan, Hari D Pagehgi, Amy R Sukamto, Made AP Dwipayana)	187 – 191
A RARE CASE OF NEUROENDOCRINE TUMOR FOLLOWING RADICAL NEPHRECTOMY (Muhammad Rozaqy Ishaq, Nafis Audrey Febriansyah, Soetojo)	192 – 194

Case Report

A RARE CASE OF NEUROENDOCRINE TUMOR FOLLOWING RADICAL NEPHRECTOMY

Muhammad Rozaqy Ishaq, Nafis Audrey Febriansyah,^{ID} Soetojo^{ID}

Department of Urology, Faculty of Medicine, Universitas Airlangga/ Dr. Soetomo General Academic Hospital, Surabaya, Indonesia

ABSTRACT

Neuroendocrine Tumors (NETs) are a diverse range of neoplasms with various biological and histologic features and therapeutic responses. The prevalence of primary renal carcinoids is scarce worldwide. At the moment, complete surgical resection is the primary treatment against primary neuroendocrine tumors of the kidney. Nephrectomy followed by the lymph node dissection is a standard procedure for localized primary renal NETs. Since renal carcinoid tumor is extremely rare, we decided to present a unique case of a 25-years-old male with neuroendocrine renal carcinoid tumor following radical nephrectomy. The results indicated a solid, solitary tumor verified on the frozen section because a postoperative CT-scan showed a recurring mass in the renal fossa following radical nephrectomy. The case emphasized the need to investigate primary renal NET in the workup and histological examination of renal tumors and also contributed to our understanding of this infrequent clinical entity.

Keywords: Neuroendocrine tumors; NETs; carcinoid tumor; radical nephrectomy; tumor

ABSTRAK

Neuroendocrine Tumors (NET) merupakan jenis neoplasma yang memiliki variasi pada fitur biologis dan histologis serta respons terapeutiknya. Prevalensi terjadinya tumor renal karsinoid secara primer sangat jarang di seluruh dunia. Saat ini, terapi definitif untuk jenis tumor neuroendokrin adalah reseksi total. Prosedur standar untuk tumor neuroendokrin lokal adalah nefrektomi yang diikuti diseksi kelenjar getah. Karena insidensi tumor karsinoid ginjal sangat jarang, kami memutuskan untuk mempresentasikan sebuah kasus unik seorang pria berusia 25 tahun dengan tumor karsinoid ginjal neuroendokrin setelah dilakukan nefrektomi radikal. Hasil operasi menunjukkan tumor soliter padat yang diverifikasi pada potong beku karena CT-scan pascaoperasi menunjukkan massa berulang di fossa renalis setelah nefrektomi radikal. Kasus ini menekankan perlunya pemeriksaan ginjal NET primer pada penyiapan dan pemeriksaan histologis tumor ginjal yang berkontribusi pada pemahaman kita tentang entitas klinis yang jarang ini.

Kata kunci: Tumor neuroendokrin; NETs; tumor karsinoid; nefrektomi radikal; tumor

Correspondence: Soetojo, Department of Urology, Faculty of Medicine, Universitas Airlangga/ Dr. Soetomo General Academic Hospital, Surabaya, Indonesia. E-mail: s.tojowirjopranoto@yahoo.com

pISSN:2355-8393 • eISSN: 2599-056x • doi: 10.20473/fmi.v58i2.33283 • Fol Med Indones. 2022;58:192-194

• Submitted 6 Feb 2021 • Received 28 Mar 2022 • Accepted 8 May 2022 • Published 5 Jun 2022

• Open access under CC-BY-NC-SA license • Available at <https://e-journal.unair.ac.id/FMI/>

INTRODUCTION

Neuroendocrine Tumors (NETs) are a diverse range of neoplasms that vary in biological and histologic features and therapeutic responses. NETs are divided into well-differentiated and poorly-differentiated neoplasms (Klimstra et al. 2010). The gastrointestinal system, pancreas, and lungs are the most common sites for well-differentiated NET carcinoid tumors. Carcinoids of the genitourinary tract, especially those arising primarily from the kidney, are extremely rare (Bégin et al. 1998). Less than 1% of reported carcinoid

tumors were discovered in the genitourinary system (Murali et al. 2006). However, reported renal carcinoid tumors are only within 19% of all patients with carcinoids in the genitourinary system (Martignoni & Eble 2003). Primary renal carcinoid tumors do not advance progressively. Instead, they grow slowly and become non-functional in most cases. They were detected incidentally and showed no sex predilection. Patients are usually around 23 to 78 years old, with an incidence age lower than renal cell carcinoma (Jain et al. 2010).

Complete surgical resection is the primary treatment against primary neuroendocrine tumors of the kidney. Nephrectomy followed by dissection of the lymph node is a standard procedure for localized primary renal NETs (Korkmaz et al. 2013). Since renal carcinoid tumor is extremely rare, we decided to present a unique case of a 25-years-old male with neuroendocrine renal carcinoid tumor following radical nephrectomy.

CASE REPORT

A 25-year-old male was admitted to the outpatient clinic of Dr. Soetomo General Academic Hospital, Surabaya, Indonesia, with a chief complaint of a lump on the left flank area for a year, and the lump is getting more prominent over the last five months. The patient also complained that the pain was arising from the lump for the last five months. The patient also reported intermittent hematuria. The patient denied fever, nausea, and vomiting. The patient was also denied for stone expulsion history, and there was no history of smoking. There was no history of diabetes mellitus and hypertension in the family. This patient underwent a radical nephrectomy in Dr. Soetomo General Academic Hospital in 2019. Physical examination showed a tender left flank mass, with no costovertebral angle tenderness.

The mass was solid, round, and mobile with a distinct border. No prostate enlargement was found on digital rectal examination, so it was otherwise normal. Urinalysis and complete blood count showed normal results. Thorax radiographic X-Ray showed normal results, as shown in Figure 1. An abdominal CT scan with contrast showed a complex cyst (16 HU) in the left renal fossa with 14.7 x 9.5 x 6.8 cm in size with contrast enhancement (53 HU). The mass pushed the spleen into the superior area and attached to the psoas major muscle with an indistinct border (Figure 2). The patient was assessed with residual left renal tumor post-radical nephrectomy. We periodically evaluated the clinical features (the sign of haematuria, mass, and metastasis), radiological assessment, and periodic surveillance were done annually.

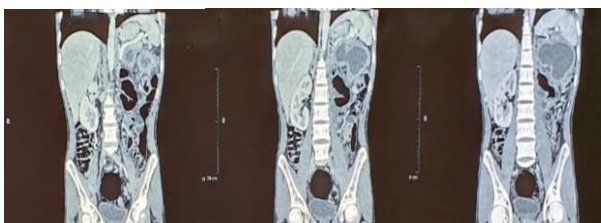


Figure 1. Plain thorax X-ray showing a normal result



Figure 2. Abdominal CT-Scan with contrast examination indicating a mass in the left renal fossa

DISCUSSION

The prevalence of primary renal carcinoids is scarce worldwide. Approximately 65 cases have been reported (Litwinowicz et al. 2011). The previous study by Romero et al. (2006) showed that the median age of the patients was 49 years old (ranging from 12 to 68), with 35.7% of patients being under the age of 40. Overall, there was no sex preference, but primary carcinoid tumors in the horseshoe kidneys were more prevalent in males, with a 1.5:1 male-to-female ratio (Romero et al. 2006). The right kidney had more involvement than the left (60.9% vs. 39.1% of all cases). The renal parenchyma was the apparent source of carcinoids in 76.2% of patients with non-horseshoe kidneys. In two cases, the predominant site was the renal pelvis (4.3%) (Kuba et al. 2017, Rudrick et al. 1995). The isthmus or paraisthmus area was predominantly implicated in cases with horseshoe kidneys.

Primary renal carcinoid is often associated with another renal pathology. Horseshoe kidneys were present in 10 patients (17.8%), renal teratomas were present in 8 patients (14.3%), and polycystic kidney disease was found in 1 patient (1.8%) (Kim & Suh 2004 Kurzer et al. 2005). However, the association between primary renal carcinoid tumor and other congenital renal defects is still unclear (Lodding et al. 1997, Okoń 2008). The relative risk (RR) was assessed by Krishnan et al. (1997) to be 62 and by Motta to be 120 (Kawajiri et al. 2004, Lane et al. 2007). The histogenesis is unknown since neuroendocrine cells are not detected in normal adult renal parenchyma, whilst these cells arise in the kidney throughout embryogenesis (Lane et al. 2007, Shurtleff et al. 2005). Abdominal or flank discomfort, hematuria, fever, and weight loss are the most prevalent clinical symptoms identical to those of other renal tumors.

A palpable mass may be seen in 28% of cases. As what was found in this patient, left flank mass and hematuria were apparent. Renal carcinoids seem indistinguishable from other renal tumors on imaging examinations (CT, MRI, USG). Renal cell carcinoma is thus a common diagnosis prior to surgery. Carcinoid tumors are generally solitary, yellowish to tan to grey tumors on the surface. The sizes recorded range from 2 to 17 cm (average 6.4 cm). The lesion is normally solid. However, it might rarely include a cystic component, as found with this patient. Partial or radical nephrectomy with lymph node dissection is the sole therapeutic option. Chemotherapy is only administered when liver metastases are present (Kawajiri et al. 2004, Romero et al. 2006). Due to the tumor's rarity, there is limited information on prognosis or prognostic factors (Rodríguez-Covarrubias et al. 2007).

CONCLUSION

We presented a rare occurrence of a large, well-differentiated primary renal neuroendocrine tumor in a young man. The operational results indicated a solid, solitary tumor verified on the frozen section. A postoperative CT-scan showed a recurring mass in the renal fossa following radical nephrectomy. The case emphasizes the need to investigate primary renal NET in the workup and histological examination of renal tumors and contributes to our understanding of this infrequent clinical entity.

ACKNOWLEDGMENT

We thank the medical record staff of Dr. Soetomo General Academic Hospital, Surabaya, Indonesia.

REFERENCES

- Bégin L, Guy L, Jacobson S, et al (1998). Renal carcinoid and horseshoe kidney: A frequent association of two rare entities--a case report and review of the literature. *J. Surg. Oncol.* 68, 113–119.
- Jain D, Sharma M, Singh K, et al (2010). Primary carcinoid tumor of the kidney: Case report and brief review of literature. *Indian J. Pathol. Microbiol.* 53, 772–774.
- Kawajiri H, Onoda N, Ohira M, et al (2004). Carcinoid tumor of the kidney presenting as a large abdominal mass: Report of a case. *World J. Surg. Oncol.* 34, 86–89.
- Kim J, Suh K (2004). Primary carcinoid tumor in a mature teratoma of the kidney: Ultrasonographic and computed tomographic findings. *J. Ultrasound Med.* 23, 433–437.
- Klimstra D, Modlin I, Coppola D, et al (2010). The pathologic classification of neuroendocrine tumors: A review of nomenclature, grading, and staging systems. *Pancreas* 39, 707–712.
- Korkmaz T, Seber S, Yavuzer D, et al (2013). Primary renal carcinoid: Treatment and prognosis. *Crit. Rev. Oncol. Hematol.* 87, 256–264.
- Krishnan B, Truong L, Saleh D, et al (1997). Horseshoe kidney is associated with an increased relative risk of primary renal carcinoid tumor. *J. Urol.* 157, 2059–2066.
- Kuba M, Wasserman A, Vnencak-Jones C, et al (2017). Primary carcinoid tumor of the renal pelvis arising from intestinal metaplasia: An unusual histogenetic pathway? *Appl. Immunohistochem. Mol. Morphol.* 25, 49–57.
- Kurzer E, Leveille R, Morillo G (2005). Rare case of carcinoid tumor arising within teratoma in kidney. *Urology* 66, 5–6.
- Lane B, Chery F, Jour G, et al (2007). Renal neuroendocrine tumours: A clinicopathological study. *BJU Int.* 100, 1030–1035.
- Litwinowicz R, Szpor J, Januś G, et al (2011). Primary carcinoid tumour in horseshoe kidney. *Int. J. Urol.* 62, 72–74.
- Lodding P, Hugosson J, Hansson G (1997). Primary carcinoid tumour with ossification masquerading as calyx stone in a horseshoe kidney. *Scand. J. Urol. Nephrol.* 31, 575–578.
- Martignoni G, Eble J (2003). Carcinoid tumors of the urinary bladder. Immunohistochemical study of 2 cases and review of the literature. *Arch. Pathol. Lab. Med.* 127, 22–24.
- Murali R, Kneale K, Lalak N, et al (2006). Carcinoid tumors of the urinary tract and prostate. *Arch. Pathol. Lab. Med.* 130, 1693–1706.
- Okoń K (2008). Pathology of renal tumors in adults. Molecular biology, histopathological diagnosis and prognosis. *Polish J. Pathol.* 59, 129–176.
- Rodríguez-Covarrubias F, Gómez X, Valerio J, et al (2007). Carcinoid tumor arising in a horseshoe kidney. *Int. Urol. Nephrol.* 39, 373–376.
- Romero F, Rais-Bahrami S, Permpongkosol S, et al (2006). Primary carcinoid tumors of the kidney. *Adv. Urol.* 176, 2359–2366.
- Rudrick B, Nguyen G, Lakey W (1995). Carcinoid tumor of the renal pelvis: Report of a case with positive urine cytology. *Diagn. Cytopathol.* 12, 360–363.
- Shurtleff B, Shvarts O, Rajfer J (2005). Primary carcinoid tumour of the kidney. A case report and review of the literature. *Adv. Urol.* 7, 229–233.

