Chinese Society of Comparative Pathology
中華民國比較病理學會
第 71 次比較病理學研討會
生殖及泌尿疾病 (Reproductive and Urinary Systems Diseases)

主辦單位

Chinese Society of Comparative Pathology

中華民國比較病理學會

School of Veterinary Medicine, National Taiwan University

國立台灣大學獸醫專業學院

Dec. 10, 2017 (中華民國 106 年 12 月 10 日)

SCHEDULE
71th MEETING OF COMPARATIVE PATHOLOGY
中華民國比較病理學會 第 71 次比較病理學研討會

時間：106 年 12 月 10 日(星期日)
地點：**國立台灣大學獸醫專業學院獸醫三館 B01**
地址：台北市羅斯福路四段一號 電話：0963750228

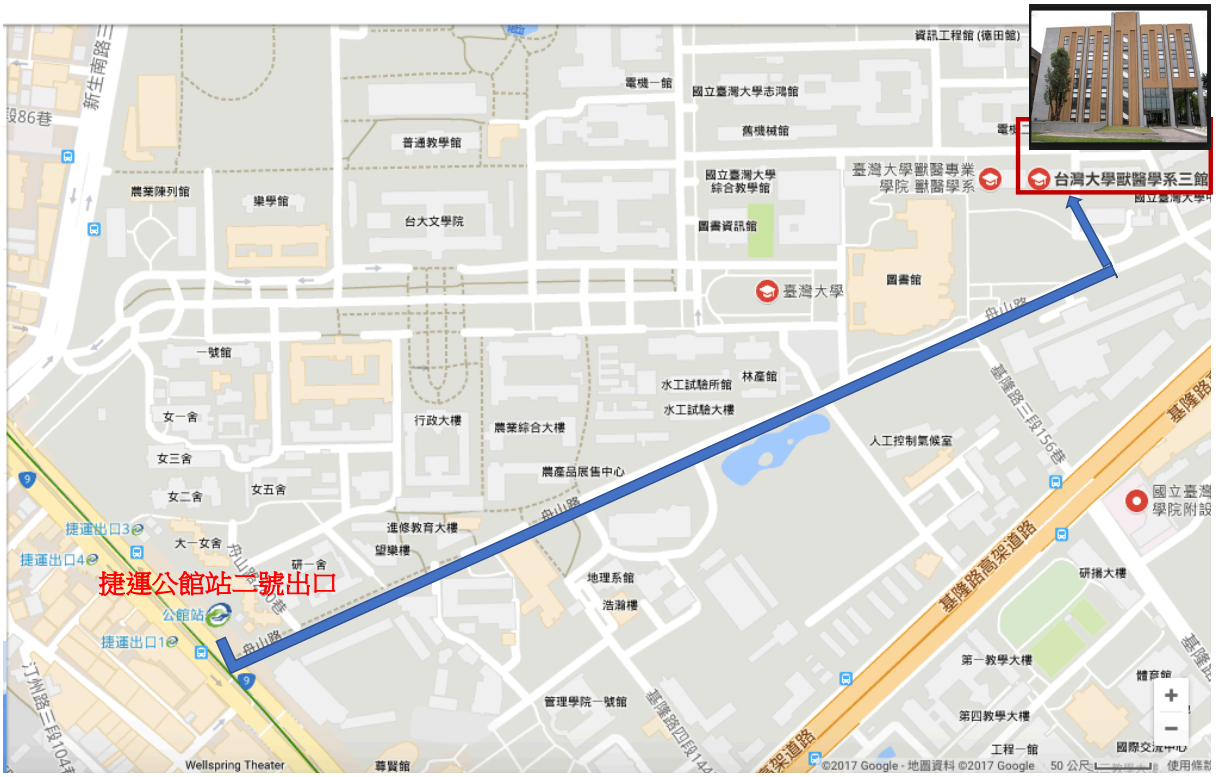
Time (時間)	Schedule(議程)		Moderator (主持)
08:30~09:20	Registration (報到)		
09:20~09:30	Opening Ceremony (致詞) 許永祥 理事長/ 鄭謙仁 院長		
09:30~10:30	專題演講	專題演講者：**林水龍** 教授 國立台灣大學醫學院生理學研究所/台大醫院內科部主治醫師 專題演講題目：Physiology and Pathophysiology of Kidney Pericytes	張惠雯 秘書長
10:30-11:00	Coffee Break (拍團體照)		
11:00~11:25	Case 489	**Ku, Yen-Te** (谷彥德), MD Student; Hsu Yung-Hsiang (許永祥), MD. Hualien Tzu-Chi Hospital and Buddhist Tzu-Chi University (佛教慈濟綜合醫院暨慈濟大學)	張惠雯 秘書長
11:25~11:50	Case 490	**Shih, C.W.** (施洽雯), M.D., M.S.[1] Hsu, H. S (徐慧興), M.D., PhD.[2], Chen, C.T. (陳朱德), M.D.[1] 1. Department of Pathology, Lotung Poh-Ai Hospital (羅東博愛醫院病理科) 2. Department of Urology, Lotung Poh-Ai Hospital (羅東博愛醫院泌尿科)	張惠雯 秘書長
11:50~13:10	Lunch and Board Meeting (午餐及理監事會議)		
13:10~13:35	Case 491	**Fang-Yi Tsai (蔡芳宜),** DVM, MS.[1, 4]; Ju-Pai Kao (高如柏), DVM, MS.[2]; Ruo-Chan Wang (王若禪), DVM[2]; Hue-Ying Chiou (邱慧英), DVM, Ph.D.[1]; Jiunn-Wang Liao (廖俊旺), DVM, Ph. D.[1,3.] [1] Graduate Institute of Veterinary Pathobiology, National Chung Hsing University（國立中興大學獸醫病理生物學研究所） [2]Avian and Exotic Animal Clinic,Veterinary Medical Teaching Hospital, National Chung Hsing University（國立中興大學獸醫教學醫院鳥禽與野生動物科） [3]Animal Disease Diagnostic Center, National Chung Hsing University（國立中興大學動物疾病診斷中心） [4]Department of Veterinary Medicine, National Chung Hsing University（國立中興大學獸醫學研究所）	廖俊旺 常務監事
13:35~14:00	Case 492	**Chang, Hao-Kai (張皓凱)**, DVM, PhD candidate; Lin, Cheng-Chung (林正忠), DVM, PhD[1]; Hue-Yin Chiou (邱慧英), DVM, PhD[1] [1] Graduate Institute of Veterinary Pathobiology, National Chung Hsing University (國立中興大學獸醫病理生物學研究所)	廖俊旺 常務監事

14:00~14:25	Case 493	**蘇雪妍**, 病理科 住院醫師; 陳燕麟, 病理科 主治醫師 Cardinal Tien Hospital (天主教耕莘醫療財團法人耕莘醫院)	施洽雯 理事
14:25~15:00	Coffee Break		
15:00~15:25	Case 494	**Chang, Jun-Liang**（張俊梁）, MD, Ph.D. Department of Pathology & Laboratory Medicine, Taoyuan Armed Forces General Hospital （國軍桃園總醫院 病理檢驗部）	施洽雯 理事
15:25~15:50	Case 495	**Li, Wen-Ta** (李文達), DVM, MS; Chen, Bo (陳波), MS; Wang, Fun-In (王汎熒), DVM, PhD Graduate Institute of Molecular and Comparative Pathobiology, School of Veterinary Medicine, National Taiwan University (國立台灣大學獸醫專業學院分子暨比較病理生物學研究所)	鄭謙仁 理事
15:50-16:15	Case 496	**Chien, Y.C.** (簡耀君), D.V.M., M.S.; Chiang, Y.C. (蔣雨青), D.V.M., M.S.; Lin, C.C. (林長青), D.V.M. Evergreen Animal Hospital (長青動物醫院)	鄭謙仁 理事
16:15-16:50	General Discussion (綜合討論)		

會議當天注意事項

一、交通部分：

1. 地圖(公館捷運站二號出口→舟山路→獸醫三館地下室 B01)



目　錄

Special Lecture
(專題演講)
題目：Physiology and Pathophysiology of Kidney Pericytes

Shuei-Liong Lin 林水龍 教授

Graduate Institute of Physiology, National Taiwan University College of Medicine
Renal Division, National Taiwan University Hospital
國立台灣大學醫學院生理學研究所/台大醫院內科部主治醫師

Abstract

Pericytes are interstitial mesenchymal cells found in many major organs. In the kidney, microvascular pericytes are defined anatomically as extensively branched collagen-producing cells in close contact with endothelial cells. Although many molecular markers have been proposed, none of them can identify the pericytes with satisfactory specificity or sensitivity. The roles of microvascular pericytes in kidneys were poorly understood in the past. Recently, by using genetic lineage tracing to label collagen-producing cells or mesenchymal cells, the elusive characteristics of the pericytes are illuminated. In healthy kidney, the pericytes are found to take part in the maintenance of microvascular stability. Detachment of the pericytes from microvasculature and loss of close contact with endothelial cells are observed during renal insult. Renal microvascular pericytes are shown to be the major source of scar-forming myofibroblasts in fibrogenic kidney disease. Targeting the crosstalk between pericytes and neighboring endothelial cells or tubular epithelial cells may inhibit the pericyte-myofibroblast transition, prevent peritubular capillary rarefaction, and attenuate renal fibrosis. In addition, renal pericytes produce erythropoietin in healthy kidneys by sensing the change of oxygenation and hemoglobin concentration. However, the ability of erythropoietin production decreases in pericytes-derived myofibroblasts in chronic kidney disease, leading to renal anemia. Recent advances on epigenetics create a new field to study erythropoietin gene expression at chromatin level. Demethylating agent has shown the restoration of erythropoietin expression as well as downregulation of α smooth muscle actin in myofibroblasts. Through this talk I would like to share the knowledge in the physiology and pathophysiology of kidney pericytes.

MEETING OF COMPARATIVE PATHOLOGY
December 10, 2017
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CASE DIAGNOSIS
71cp slide website
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Case No.	Presenter	Slide No.	Diagnosis
Case 489	谷彥德	S2017 702313	Malakoplakia due to *Escherichia coli* infection, left testis http://www.ivp.nchu.edu.tw/slide_view.php?id=1354
Case 490	施洽雯	LP15_5117	Xp11.2 translocation renal cell carcinoma http://www.ivp.nchu.edu.tw/slide_view.php?id=1355
Case 491	蔡芳宜	CO17-382	Anaplastic renal cell carcinoma in a Djungarian hamster http://www.ivp.nchu.edu.tw/slide_view.php?id=1351
Case 492	張皓凱	CO17 138A_RK	Cystitis, bilateral ureteritis and pyelonephritis, hemorrhagic, necrotic, purulent, severe, diffuse, chronic progressive, urinary bladder, ureters and kidneys http://www.ivp.nchu.edu.tw/slide_view.php?id=1361
Case 493	蘇雪妍	397022A 397022A_1	Mucin-producing urothelial-type adenocarcinoma of the prostate (MPUAP) http://www.ivp.nchu.edu.tw/slide_view.php?id=1363 http://www.ivp.nchu.edu.tw/slide_view.php?id=1364
Case 494	張俊梁	121311E	Left paratesticular dedifferentiated liposarcoma with leiomyomatous differentiation. http://www.ivp.nchu.edu.tw/slide_view.php?id=1342
Case 495	李文達	NTU 2016-1963	Renal nephroblastoma, blastema-predominant with metastasis to gingiva, renal mass http://www.ivp.nchu.edu.tw/slide_view.php?id=1352
Case 496	簡耀君	EG1775, EG1775R	Testis, left: Malignant mixed germ cell–sex cord stromal tumor (spermatocytic germinoma and Sertoli cell tumor), with angiolymphatic invasion. Testis, right: Germ cell atrophy, multifocal, moderate. http://www.ivp.nchu.edu.tw/slide_view.php?id=1357 http://www.ivp.nchu.edu.tw/slide_view.php?id=1358

Case Number: 489

Ku, Yen-Te (谷彥德), MD Student; Hsu Yung-Hsiang (許永祥), MD.
Hualien Tzu-Chi Hospital and Buddhist Tzu-Chi University (佛教慈濟綜合醫院暨慈濟大學)

CASE HISTORY:

A 40-year-old male cement ex-worker, single.

Clinical History:

The patient, who had underlying alcoholic pancreatitis-related DM in poor control, liver cirrhosis, and affective psychosis, was in his usual state until he noticed left scrotal swelling with mild miction pain. He came to Urology department of Hualien Tzu Chi Hospital for further evaluation and treatment on 2017/05/08 and Cephradine was given. However, the discomfort feeling could not relieve and he came back to our emergency room again. Cefazolin and Ketorolac were given for controlling symptoms. He visited to our Urology department again on 2017/05/22 because the pain sensation and swelling became severe than before. Physical examination showed swelling and red scrotum and sonography showed abscess containing fluid-liked images. Under the impressions of epididymitis and suspected orchitis, he was admitted to our ward for treatment. IV hydration and empirical parenteral antibiotics (Ciprofloxacin) were given. His condition became stable but poor blood sugar control . He was discharged on 2017/05/15 and went back again on 2017/05/22 for progressive scrotal pain. Sonography on 2017/05/23 showed left epidiymorchial abscess. Because of the above information, scrotal abscess was the leading diagnosis. He received left orchiectomy on 2017/05/24. Flumarin was given. His blood sugar was controlled around 300-600 mg/dl with regular insulin injection. He was discharged on 2017/05/29 for OPD follow up.

Clinical Pathology:

Pus culture on 2017/05/24: Escherichia coli

Gross Findings:

Multiple soft necrotic-liked lesions on the cut surface of testis..

CASE RESULT:

Histopathologic Findings: Granulomatous inflammation with Michaelis-Gutmann bodies in monocytes.

Microscopically, it showed many granulomatous inflammation sites in seminiferous tubules and interstitial areas. Bacterial clumps can also be found in seminiferous tubules. Some typical Michaelis-Gutmann bodies were also seen in the monocytes. Von Kossa stain showed some calcified substance in the cytoplasm and PAS stain showed numerous positive granules in the cytoplasm of monocytes. Gram stain showed gram negative bacilli, consistent with Escherichia coli infection .

Special stain:

Gram stain: GNB (+)

Von Kossa stain: Some calcified substance in the cytoplasm of monocytes.

PAS stain: Numerous positive granules in the cytoplasm of monocytes.

Differential Diagnosis: tuberculosis, Mycotic parasitic infection, sarcoidosis

Diagnosis: Malakoplakia due to Escherichia coli infection, left testis

Discussion:

Malakoplakia is an uncommon granulomatous disease occur in the urinary tract, the bladder, ureters, renal pelvis, kidney, testis, and colon. Nearly half of these patients were immunosuppressed; especially DM such as our patient . The prominent symptoms are often hematuria and frequency of urination. The disease has been reported at all age extremes and in both sexes but the ratio of sex is about 4:1. This illness is caused by gram negative coliforms (E. coli or Proteus) that results in chronic inflammatory state, followed by the presence of large cells with abundant eosinophilic cytoplasm called Von Hansemann cells and within the cytoplasm are present calcified inclusion bodies called as Michaelis-Gutmann (MG) bodies which exhibit a concentric laminated (targetoid or owl's eye) appearance . The clinical presentation usually presents with urinary symptoms and urinary tract infection (72% due to E. coli). Testicular enlargement can also be noted in almost patients such as our patient.

The pathophysiology of malakoplakia is believed to result from the inadequate killing of bacteria by macrophages or monocytes that exhibit defective phagolysosomal activity. Partially digested bacteria accumulate in monocytes or macrophages and lead to the deposition of calcium and iron on residual bacterial glycolipid. The presence of the resulting basophilic inclusion structure, the Michaelis-Gutmann body, is considered pathognomonic for malakoplakia.

Excision of lesion area and drainage of abscesses are fundamental to diagnosis and treatment. Surgery combined with antibiotic therapy should be directed against E. coli or other organisms recovered on culture. Therapy with antibiotics that concentrate in macrophages (eg, quinolone, trimethoprim-sulfamethoxazole) is associated with a high cure rate. In our patient, Flumarin was given and the patient's condition was improved.

In conclusion, our case presented with features of progressive left scrotal swelling with mild miction pain, and progressive scrotal pain. He received left orchiectomy and surgical pathology found granulomatous inflammation with MG bodies in seminiferous tube and epididymis diagnostic of malakoplakia. The patient's infectious control was good and discharged five days after surgery.

References:

1. Morgan TA, Rabban JT, Filly RA. Testicular malakoplakia: a rare sonographic mimic of malignancy. J Clin Ultrasound. 2015 Mar;43(3):199-202.
2. Kang YJ, Kim SW, Lee KS, Kim KH Malacoplakia of the epididymis. Korean J Urol. 2013 Apr;54(4):274-6.
3. Roy S, Hooda S, Parwani AV. Idiopathic granulomatous orchitis. Pathol Res Pract. 2011 May 15;207(5):275-8.
4. Mannan AA, Kahvic M, Singh NG, Abu Sara Y, Bharati C.An unusual case of extensive epididymotesticular malakoplakia in a diabetic patient. Int Urol Nephrol. 2010 Sep;42(3):569-73.
5.Alvarez Bandrés S, Guarch Troyas RM, Cebrián Lostal JL, Ripa Saldías L, de Pablo Cárdenas A, Jiménez Parra JD. Malacoplakia of the testis: a new case report and a literature review.
Actas Urol Esp. 2009 Oct;33(9):1028-31.
6. Waisman J. Malakoplakia outside the urinary tract. Arch Pathol Lab Med. 2007 Oct;131(10):1512;
7. Kusuma V, Niveditha SR, Krishnamurthy, Ramdev K. Epididymo-testicular malacoplakia--a case report. Indian J Pathol Microbiol. 2006 Jul;49(3):413-5.

Case Number: 490
Chinese Society of Comparative Pathology, December, 2017

Shih, C. W. (施洽雯), M.D., M.S. [1] **Hsu, H. S (徐慧興), M.D., PhD. [2]**
Chen, C.T. (陳朱德), M.D. [1]

1. Department of Pathology, Lotung Poh-Ai Hospital (羅東博愛醫院病理科)
2. Department of Urology, Lotung Poh-Ai Hospital (羅東博愛醫院泌尿科)

CASE HISTORY:

Signalment: 12-year-old boy.

Clinical History:
A 12-year old boy came to the OPD of the Department of Urology of Lotung Poh-Ai Hospital on May 3, 2015 with the chief complaint of gross hematuria. This 12 years old boy had history of left renal tumor with first hematuria on March 6, 2013, and repeated hematuria in June, 2014, September, 2014 and January, 2015. The previous abdominal and pelvic CT scan on March 6, 2013 showed left renal mass measuring up to 3.3 cm. No other mass or lymph node was seen. Repeat CT scan was performed on June 12, 2014 and showed a tumor involving the lower interpolar region of left kidney. First renal tumor biopsy was performed on June 13, 2014 and showed no evidence of malignancy. TAE (Transcatheter Arterial Embolization) was performed on September 10, 2014. Repeat CT scan was performed on January 25, 2015 and showed left renal tumor at the interpolar region and measuring up to 2.1 cm. For suspicious of malignancy clinically, repeat renal biopsy was performed on May 5, 2015. The pathology showed malignancy. He underwent nephrectomy on May 21, 2015. Whole body bone scan was performed on May 27, 2015 and showed no evidence of metastasis. Grossly, the renal mass is ill-defined and measuring up to 9.6 x 7.2 x 6.0 cm. Cut sections showed tan-yellow color with areas of necrosis and hemorrhage. Areas of cystic change and papillary appearance were also noted.

Clinical Pathology:
BUN: 19 mg/dL (6-20 mg/dL), Creatinine: 1.0 mg/dL (0.7-1.3 mg/dL), Na: 139 mmol/L (135-145 mmol/L), K: 4.1 mmol/L (3.5-5.1 mmol/L), RBC: $5.07x10^6$/uL ($4.6\text{-}6.2x10^6$/uL), Hb: 13.0 gm/dL (14.0-18.0 gm/dL), Hct: 41.0 % (40-54%), Plt: 37.5 $x10^4$/dL (15-40 $x10^4$/dL), WBC: 7800/uL (4500-11000/uL), Lymphocyte: 33.9% (20.0-45.0%), Neutrophil: 56.1% (45.0-75.0%), Monocyte:6.8% (0.0-9.0%), Eosinophil: 2.7% (1.0-3.0%).

CASE RESULT:

Histopathologic Findings:
Microscopically, the tumor mass contains cancer tissue composed of proliferated papillary structures lined by neoplastic columnar epithelial cells with irregular size and shape with large and hyperchromatic nuclei, and scanty or moderate amount of eosinophilic or clear cytoplasm. Areas of tumor necrosis and hemorrhage are noted. No lymphatic duct or blood vessel invasion is noted. The tumor is limited to the kidney. The perirenal fatty tissue and ureter are not involved by the tumor. The non-tumor renal tissue shows chronic pyelonephritis. The adrenal gland is free of malignancy. The renal artery and vein are also free of malignancy. No malignancy is seen of the renal hilar lymph nodes.

Immunohistochemistry:
Sections of tissue specimen were subjected for immunohistochemical stain. On

immunohistochemical analysis, the tumor cells were positive for TFE3, CK18, Pax8, E-cadherin, CD10, CD117, and AMACR, and negative for 34βE12, RCC, CK7, and CA9. and focal weak positive for vimentin.

Differential diagnosis:
1. Clear cell renal cell carcinoma
2. Papillary renal cell carcinoma
3. Chromophobe renal cell carcinoma
4. Xp11.2 translocation renal cell carcinoma

Diagnosis: Xp11.2 translocation renal cell carcinoma.

Comments:
Renal cell carcinoma (RCC) is a group of malignancy arising from tubular epithelium of kidney. It includes more than 10 histological types, which are generally divided into two categories: clear cell and non-clear cell (e.g., papillary, chromophobe, collecting ducts) subtypes. Renal carcinomas associated with Xp11.2 translocations were recently listed by the 2004 World Health Organization (WHO) classification of kidney tumors as a distinct entity. They usually affect children and adolescents, with only a few reported adult cases to date. It is estimated that approximately one-third of pediatric RCCs are Xp11.2 translocation RCCs (Xp11 TRCCs), whereas conventional clear cell RCCs make up about 15% of RCCs in children. Unlike that found in children, conventional clear cell RCCs make up 70% of RCCs in adults and 53% in young adults, However, the incidence of Xp11 TRCCs ranges from only 0.95% to 5% of all adult RCCs. There is a female predominance with a male to female ratio up to 1:2.

Xp11 TRCCs result from gene fusions between the TFE3 gene located on chromosome Xp11.2. The TFE3 gene is a member of the microphthalmia transcription factor (MiTF) family, which is a critical factor in melanocyte development. Up to date, at least 6 different Xp11 TRCC have been identified and characterized at the molecular level.

The etiology of Xp11 TRCC is unclear, however, two recent reports have suggested that a previous exposure to cytotoxic chemotherapy in childhood is a risk factor for developing Xp11 TRCC. Ramphal et al reported a case of ASPL-TFE3 translocation RCC, which developed 5 years after cytotoxic chemotherapy for ganglioneuroblastoma. Argani et al reported that approximately 10% to 15% of Xp11 TRCCs were associated with previous exposure to cytotoxic chemotherapy in childhood and, therefore, suggested that Xp11 TRCCs should be added to the list of chemotherapy-associated secondary neoplasms in children (along with acute leukemias, soft tissue sarcomas, and malignant gliomas).

Clinically, Xp11 TRCCs usually present as an asymptomatic, painless renal mass even when diagnosed at advanced stages, often identified accidentally during abdominal imaging, but there have been increasing, recent reports of an aggressive clinical course in adult cases.

Macroscopically, Xp11 TRCCs are usually well-circumscribed tan-yellow, with a “pushing margin” and pseudocapsule, and contained areas of hemorrhage, necrosis, therefore, may grossly mimic conventional clear cell RCC. Although, a cystic gross appearance is uncommon for Xp11 TRCCs, Suzigan et al. recently reported a Xp11 TRCC in a 17-year-old adolescent girl with multilocular cystic RCC-like features.

Microscopically, Xp11 TRCCs typically have mixed papillary and nested/alveolar architecture, composed of cells with clear and/or eosinophilic, granular, voluminous cytoplasm; discrete borders;

vesicular chromatin; prominent nucleoli; and the presence of extensive psammoma bodies. The frequency of psammoma bodies is 50% to 60%. However, psammoma bodies, a feature that is rarely observed in conventional clear cell RCC, can occasionally be seen in papillary RCC. The usual absence of foamy macrophages, nuclear grooves, stromal inflammatory cells, and necrotic background in Xp11 TRCC may be useful in distinguishing them from papillary and conventional clear cell RCC.

Xp11 TRCC can occur in adults and may be aggressive cancers and, hence, require morphologic distinction from conventional clear cell and papillary RCCs. However, due to the considerable overlap in morphology between Xp11 TRCC and papillary RCC, a correct histopathological diagnosis cannot be made by merely using hematoxylin and eosin (H&E) staining.

Immunohistochemically, the most distinctive IHC feature of Xp11 TRCC, which is absent in conventional clear cell and papillary RCC, is a detectable nuclear staining for the mutant TFE3 protein. Two recent large, original clinicopathologic studies of 28 cases and 31 cases of Xp11 TRCCs reported the frequency of TFE3 immunostaining as 100% and 82% respectively. Generally, the expression of cytokeratins (AE1/AE3, CK7, and epithelial membrane antigen [EMA]) and melanocytic markers (HMB-45 and Melan-A) were rare and weak, the expression of vimentin was variable and weak, and that of CD10, E-cadherin, and RCC antigen were common and strong in Xp11 TRCCs. In a large original clinicopathologic study of 31 cases of Xp11 TRCCs, Camparo et al observed immunohistochemical expression of CD10, Melan-A, E-cadherin, vimentin, HMB-45, EMA, AE1/AE3, and CK7 in 100%, 89%, 66%, 65%, 46%, 32%, 25%, and 17% of cases, respectively. Generally, the absence of CK7 and EMA expression and the overexpression of E-cadherin and CD10 in Xp11 TRCC have been suggested as useful tools in the differential diagnosis of conventional clear cell RCCs. Hence, the immunoprofile of Xp11 TRCCs (CK7, EMA, E-cadherin, CD10) may be helpful when TFE3 immunostaining is not available or doubtful. Misdiagnoses may be further compounded by the fact that TFE3 immunohistochemistry is not routinely done and there is significant histologic overlap with TFE3 negative and TFE3 positive RCC.

There is no successful and reliable treatment regimen for Xp11 TRCC; however, the most favorable outcomes have been associated with curative surgical excision with radical nephrectomy and lymph node dissection. Some patients with Xp11 TRCC have received immunotherapy because, until recently, immunotherapy has been the only standard treatment for patients with advanced stage. Compared with its more indolent presentation in the pediatric population, older adults usually present with advanced stage and distant metastasis. Prognosis is generally poor, and adult patients often succumb to a rapid terminal course despite aggressive surgical intervention.

Conclusion: Xp11 TRCCs occur primarily, but not exclusively, in children and young adults and are believed to be rather indolent even when diagnosed at advanced stages. Considering the rising incidence of RCC with the increased use of cross-sectional imaging, clinicians should be aware of Xp11 TRCC as a unique tumor and its propensity for rapid progression in adults to facilitate appropriate patient management. Considering histologic overlap of Xp11 TRCC with other RCC subtypes, it is imperative to perform TFE3 immunohistochemistry to prevent misdiagnoses in borderline or suspicious cases.

References:

1. Argani P. The evolving story of renal translocation carcinomas. Am J Clin Pathol. 2006;126(3):332–4.
2. Argani P, Lae M, Hutchinson B, et al. Renal carcinomas with the t(6;11)(p21;

q12): clinicopathologic features and demonstration of the specific alpha-TFEB gene fusion by immunohistochemistry, RT-PCR, and DNA PCR. Am J Surg Pathol. 2005;29(2):230–40.
3. Meyer PN, Clark JI, Flanigan RC, Picken MM. Xp11.2 translocation renal cell carcinoma with very aggressive course in five adults. Am J Clin Pathol. 2007; 128(1):70–9.
4. Suzigan S, Drut R, Faria P, et al. Xp11 translocation carcinoma of the kidney presenting with multilocular cystic renal cell carcinoma-like features. Int J Surg Pathol. 2007;15(2):199–203.
5. Armah HB, Parwani AV. Renal cell carcinoma in a 33-year-old male with an unusual morphology and an aggressive clinical course: possible Xp11.2 translocation. Pathology. 2008;40(3):306–8.
6. Bruder E, Passera O, Harms D, et al. Morphologic and molecular characterization of renal cell carcinoma in children and young adults. Am J Surg Pathol. 2004; 28(9):1117–32.
7. Argani P, Lae M, Ballard ET, et al. Translocation carcinomas of the kidney after chemotherapy in childhood. J Clin Oncol. 2006;24(10):1529–34.
8. Argani P, Hawkins A, Griffin CA, et al. A distinctive pediatric renal neoplasm characterized by epithelioid morphology, basement membrane production, focal HMB45 immunoreactivity, and t(6;11)(p21.1;q12) chromosome translocation. Am J Pathol. 2001;158(6):2089–96.
9. Klaassen Z, Tatem A, Burnette JO, et al. Adult xp11 translocation associated renal cell carcinoma: time to recognize. Urology. 2012;80:965-8.
10. Franzini A, Picozzi SC, Politi PL, et al. A case of renal cancer with TFE3 gene fusion in an elderly man. Urol Int. 2007;78:179-81
11. Comperat E, Camparo P, Vieillefond A. WHO classification 2004: tumors of the kidneys. J Radiol 2006;87:1015-24.
12. Ross H, Argani P. Xp11 translocation renal cell carcinoma. Pathology 2010; 42:369-73.
13. Qiu R, Bing G, Zhou XJ. Xp11.2 Translocation renal cell carcinomas have a poorer prognosis than non-Xp11.2 translocation carcinomas in children and young adults: a meta-analysis. Int J Surg Pathol 2010;18:458-64
14. Hung CC, Pan CC, Lin CC, et al. XP11.2 translocation renal cell carcinoma: clinical experience of Taipei Veterans General Hospital. J Chin Med Assoc 2011;74:500-4.

Case Number: 491
Slide No.:CO17-382
Slide view:

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CASE HISTORY

Signalment: The patient was a 2-year-10-month old, intact male Djungarian hamster

Clinical History:
A 2-year-10-month old, intact male Djungarian hamster was evaluated at veterinary medical teaching hospital of National Chung Hsing University (NCHU) because of an intra-abdominal mass of left side on July 7, 2017. After a week, the mass became larger and exploratory laparotomy was performed. Left kidney was surgically removed. Left kidney, measured 3x2.5x1.5 cm and weighed 11 grams, was full of dark brown fluid. Volume about 6.6 ml of fluid was removed, and the kidney specimen was submitted for pathological diagnosis.

Gross Findings:
Grossly, the kidney measured 2.5x2.5x1.5 cm. It was reddish to dark red and collapsed due to fluid removal. Multiple cystic structures replaced and compressed the normal renal parenchyma. Because the tumor cysts distorted the normal structure of the kidney, the accurate location where the tumor originatetumor originates was unknown.

Histopathologic Findings:
Microscopically, beside the renal medullary papilla, tumor cells mainly arranged in solid pattern, and there were remnant normal renal tubules in the other side of the medullary papilla. Morphologically, neoplastic cells had 3 patterns. The majority was arranged in solid pattern. Others arranged like urothelium, which consisted a dome-like appearance at its luminal surface, sometimes with binucleation. The urothelium-like cells were located above the solid area. Inside the solid tumor, small amount of cells arranged in tubular pattern within the solid area. The neoplastic cells have indistinct border, ample eosinophilic cytoplasm sometimes with one to multiple intracytoplasmic vesicles or granular appearance, and round to oval nuclei that contained one to multiple nucleoli. Mitosis rate was low.
Take renal anatomy and morphology into consideration, there were two kinds of tumor origins: renal tubule and urothelium. To investigate the accurate tumor origin, IHC panel including pan-CK, Vimentin, RCC marker, PAX-8, p63, S100P, GATA3 and uroplakin3 (UP3) was performed. Among the 8 antibodies, 2 antibodies (S100P and GATA3) failed to react to hamster tissues because of insufficient cross-species reactivity.

Urothelium-like cells showed positive staining of pan-CK and PAX-8, and showed negative staining of Vimentin, RCC marker, p63 and UP3. Neoplastic cells from solid area showed positive staining of PAX-8; positive to negative staining of pan-CK and Vimentin; negative staining of RCC marker, p63 and UP3. According to the results above, diagnosis of anaplastic renal cell carcinoma in a Djungarian hamster was made.

Morphological diagnosis:
Left kidney: renal cell carcinoma, anaplastic

Differential Diagnosis:
Urothelial carcinoma (UC)

Diagnosis:
Anaplastic renal cell carcinoma in a Djungarian hamster

Discussion:

Primary renal neoplasms are uncommon in domestic animals; they are usually malignant in dogs, cats, and horses and benign in cattle. In dogs approximately 70% are epithelial, 25% mesenchymal, and 5% nephroblastoma.[2] Primary renal tumors are usually unilateral but may be multiple or bilateral and can also have a multicentric origin in cattle and dogs.[2]
In Djungarian hamsters, the most commonly reported tumors are mammary gland tumors and integumental tumors, including papilloma, squamous cell carcinoma, trichoepithelioma, pilomatricoma and trichoblastoma.[4] However, there are few reports about spontaneous renal neoplasms of hamsters. To the best of our knowledge, there were only 2 reports recording renal cell carcinoma in two Siberian hamsters[6] and renal adenocarcinoma in one Syrian hamster.[7] In the first report[6], one hamster had a unilateral solitary papillary-tubular carcinoma. The other hamster had a clear-cell, a papillary-tubular, and mixed types of carcinomas in the left kidney and a cystic-papillary-tubular type of carcinoma in the right kidney. Microscopically, pleomorphic oval to polygonal cells found in the clear cell carcinoma were arranged in broad trabeculae, lobules, or nests, with congested capillary stroma and multifocal necrosis. Cytoplasm varied from eosinophilic and granular to pale and clear or vacuolated. In the cystic-papillary-tubular carcinoma, cuboidal to columnar cells were arranged in cystic, papillary, or tubular patterns. Cysts varied in size and shape and contained secretory material and erythrocytes.
The other report recorded that a spontaneous renal adenocarcinoma occurred in one adult male Syrian hamster out of 443 necropsied (0.22%) from a breeding animal house of Brazil. Microscopically, the renal cells were markedly pleomorphic and presented an abundant eosinophilic cytoplasm. Cells were cuboidal and mainly formed trabeculae of various widths without a lumen and also formed solid areas. Positive expression of vimentin and negative expression of cytokeratin 7, pan-CK and CD10 were observed in the tumor.[7]
In our case, neoplastic cells were markedly pleomorphic including round, oval, cuboidal and urothelium-like cells. Because of the urothelium-like cells and anatomy location, UC and RCC should be differentiated. Therefore, IHC panel including pan-CK, Vimentin, RCC marker, PAX-8, p63, S100P, GATA3 and uroplakin3 (UP3) was performed.[1,3,5,9,10]
Urothelium-like cells showed positive staining of pan-CK and PAX-8, and showed negative staining of Vimentin, RCC marker, p63 and UP3. Neoplastic cells from solid area showed positive staining of PAX-8; positive to negative staining of pan-CK and Vimentin; negative staining of RCC marker, p63 and UP3. Neoplastic cells of solid area had poor differentiation and underwent epithelial-mesenchymal transition (EMT), which is characterized by morphological and molecular changes in epithelial cells to transdifferentiate towards a mesenchymal cell type. When EMT occurred, epithelial neoplastic cells might lose their cytokeratin expression with/without vimentin

expression.8 Based on the results above, diagnosis of anaplastic renal cell carcinoma in a Djungarian hamster was made.

Reference:

1. Albadine R, Schultz L, Illei P, Ertoy D, Hicks J, Sharma R, Epstein JI, Netto GJ. PAX8 (+)/p63 (-) immunostaining pattern in renal collecting duct carcinoma (CDC): a useful immunoprofile in the differential diagnosis of CDC versus urothelial carcinoma of upper urinary tract.Am J Surg Pathol (34): 965-969, 2010.
2. Donald J and Travis LK. Tumors of the urinary system. In: Donald J, eds. Tumors of domestic animals. 5th ed. Wiley, St. Louis, p: 632-652, 2016.
3. Higgins JP, Kaygusuz G, Wang L, Montgomery K, Mason V, Zhu SX, Marinelli RJ, Presti JC Jr, van de Rijn M, Brooks JD. Placental S100 (S100P) and GATA3:
markers for transitional epithelium and urothelial carcinomadiscovered by complementary DNA microarray. Am J Surg Pathol (31): 673-680, 2007.
4. Kondo H, Onuma M, Shibuya H, Sato T. Spontaneous tumors in domestic hamsters. Vet Pathol (45): 674-680, 2008.
5. Langner C, Ratschek M, Tsybrovskyy O, Schips L, Zigeuner R. P63 immunoreactivity distinguishes upper urinary tract transitional-cell carcinoma and renal-cell carcinoma even in poorly differentiated tumors. J Histochem Cytochem (51): 1097-1099, 2003.
6. Li X, Wardrip C, Seps S, Padrid P. Renal Cell Carcinoma in Two Siberian Hamsters (Phodopussungorus). Contemp Top Lab Anim Sci (37): 70-73, 1998.
7. Marcele N, Luciana W, Belmira F. Spontaneous renal adenocarcinoma in a Syrian hamster (Mesocricetusauratus): frequency, morphological and immunohistochemical findings. Braz J Vet Pathol (3): 123-126, 2010.
8. Pierre P. Savagner. The epithelial-mesenchymal transition (EMT) phenomenon. Ann Oncol (21): 189-192, 2010.
9. Ramos-Vara JA, Miller MA, Boucher M, Roudabush A, Johnson GC.Immunohistochemical detection of uroplakin III, cytokeratin 7, and cytokeratin 20 in canine urothelial tumors.Vet Pathol (40): 55-62, 2003.
10. Sledge DG, Patrick DJ, Fitzgerald SD, Xie Y, Kiupel M. Differences in expression of uroplakin III, cytokeratin 7, and cyclooxygenase-2 in canine proliferative urothelial lesions of the urinary bladder. Vet Pathol (52): 74-82, 2015.

Case Number:492

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CASE HISTORY:

Signalment: A 2-year-old, toy poodle

The animal was kept in the shelter, was about 2-year-old, that was performed anus stoma and urethrostomy for about two years, because of the congenital imperforate anus and ureter atresia. Urethrostomy had been performed twice. The opening of urethra was under the artificial anus at first time. It was communicated by the feces from anus usually. Therefore, the dog was performed second time urethral stoma in a year ago. After the second times urethral stoma, the contamination of the urinary tract was not observed again clinically. The dog showed inappetency and depress on the last day morning and laid down for several hours later. Physical examination revealed bradycardia, bradypnea and severely hematuria. Supportive therapy was performed, include tracheal intubation and infusion, however it was useless.

Gross Findings:

The most significant finding of the gross pathology was diffusely hemorrhage of the urethral tract, include urinary bladder, bilateral ureter and kidney. The serosa of the urinary bladder and ureter were adhered to the dorsal of abdominal cavity. The wall of those two organs were severely thickened and the lumen were dilated. Both side of the ureter and urinary bladder were discoloration to red throughout the mucosa to serosa. The cut surface of the bilateral kidneys was mottled, and showed multiple linear, and wedge type hemorrhage and necrosis throughout the cortex and medulla in the longitudinal section. Pelvis of the both right and left kidney was also dilative with mucosa hemorrhage. Though organs of urinary system were hemorrhage, there were no remarkable finding and lithangiuria in the urethra.

CASE RESULT:

Histopathological Findings:

there were diffusely, severely hemorrhage and inflammation throughout the mucosa to serosa of the urinary bladder and ureter. The mucosal epithelia of both the urinary bladder and ureter are loss, and replaced by fibrin, abundant neutrophil, lymphocyte, foamy-macrophage and much cellular debris. The muscular layer of the urinary bladder was edema, and infiltrated by much neutrophil and lymphocyte, with coalescent necrosis of the smooth muscle. Both sides of the ureter presented the similar lesions to urinary bladder, but the lesions of the left ureter were more seriously.

Bilateral kidney presented severely purulent, hemorrhagic pyelonephritis with diffusely hemorrhage. Capsule of the kidneys were thickened, which contained much fibrin, erythrocytes and neutrophil. The cortex of the kidney showed severely tubular necrosis characterized by epithelial cell pyknosis and karyorrhecic debris with multiple vascular fibrinoid necrosis. In the high-power field, focal bacteria colony accumulated into the lumen of renal tubule could be observed. The parenchyma of the kidney expanded with moderate degenerated neutrophils, lymphocyte, and foamy-macrophage.

Bacteria isolation:

Bacterial isolation procedure was performed immediately after urine collection while necropsy. The urine specimen was examined for Gram staining, and the urine smear showed many

Gram-negative bacillus (>10 bacteria/ 1000× field). For quantitative bacterial isolation, 1 μL of urine specimen was inoculated onto blood agar, chocolate agar and MacConkey agar, respectively. After 24 hours of aerobic cultivation at 36℃, non-lactose fermenting colonies growth (>3×10^5 CFU/ mL urine) on the three media. Based on the biochemical tests (lactose -, sucrose -, glucose +, hydrogen sulfide -, citrate -, urease +, indole -, indole pyruvic acid +, Voges-Proskauer -, ornithine decarboxylase +, lysine decarboxylase -, arginine decarboxylase -, oxidase - and catalase +) and 16S rRNA sequence, the isolate was identified as *Proteus mirabilis*. Antimicrobial susceptibility was performed by using the disk diffusion method and broth dilution methods, the bacteria was resistant to ampicillin, cefazolin, doxycycline, minocycline, trimethoprim/ sulfamethoxazole, and azithromycin.

Pathological Diagnosis: Cystitis, bilateral ureteritis and pyelonephritis, hemorrhagic, necrotic, purulent, severe, diffuse, chronic progressive, urinary bladder, ureters and kidneys

Differential diagnosis:
1. Uropathogenic *Enterococcus faecalis* (UPEC) infection
2. Radiation and chemical irritation

Discussion:
In published data, there were no urinary tract infection (UTI) case with diffusely hemorrhagic symptom has been mentioned caused by *P. mirabilis*[1]. In our case, the lesions of the urethral tract presented not only wild hemorrhagic lesions in urinary bladder, ureter and kidney, but also multiple fibrinoid necrosis of the blood vessel in bilateral kidney. In much UTI case, uropathogenic *E. coli* (UPEC) can cause hemorrhagic and necrotic lesion in urinary bladder. The UPEC which can produce both hemolysin and cytotoxic necrotizing factor type 1 (CNF1), have much high tendency to cause severely UTI lesions[3]. Endotoxin of the *P. mirabilis* are similar to the *E. coli*, include hemolysin, protease, lipases, urease and others[3], so it has possibility to cause the similar lesions to UPEC.
P. mirabilis is an important organism associated to catheter-associated UTI (CAUTI), it is common in the long-term catheterization. *P. mirabilis* is rarely cause seriously symptoms in healthy person and animals, but can cause disease in the patients who have some underlying disease, include anatomic, metabolic or immune deficiency disease[4]. Although the dog in this case didn't install catheter, it still had another anatomic problem. The dog in this paper has congenital imperforate anus[5]. Therefore, it has been performed twice surgery of anus and urethral stoma. Postoperative complication is a common problem in the patient who was performed urethrostomy[6]. According to the chronic progressive lesion of the urinary bladder and kidney, the UTI should occur for a long period, though the owner of the dog didn't find any clinical symptom before it dead.
P. mirabilis is a normal flora in intestinal tract of human and play an important role in UTI[7]. Although it is important in human being, the isolation rate of *P. mirabilis* in the urine of dogs are relative high variation than in human. In a published data, the *P. mirabilis* is the most frequently isolated bacterium in the dog[2]. However, in our studies, the isolation rate of the *P. mirabilis* in the urine of dogs is very low in central Taiwan. There were totally 39 clinical urine samples that were collected from the dog that treatment in Veterinary Medical Teaching Hospital of National Chung Hsing University in 2016. *Escherichia coli* was the most common one bacterium that was isolated from urinary tract (12/39), and the *Klebsiella pneumoniae* was the second (4/39). We also isolated *Enterococcus faecalis*, *Streptococcus* spp., *Staphylococcus* spp., and *Kluyvera ascorbate* from urine sample of the dogs, but there were no *P. mirabilis* had been isolated.

References:
1. Al-Ani, I. M., Al-Murayati, H. Y., Salman, M. O. and Ghani, H. M. (2011). Histological findings of ascending urinary tract infections in experimental rats caused by *Proteus mirabilis*.

Biomedical Research.
2. Gaastra, W., van Oosterom, R. A., Pieters, E. W., Bergmans, H. E., van Dijk, L., Agnes, A. and Ter Huurne, H. (1996). Isolation and characterisation of dog uropathogenic *Proteus mirabilis* strains. *Veterinary microbiology,* **48,** 57-71.
3. Jacobsen, S., Stickler, D., Mobley, H. and Shirtliff, M. (2008). Complicated catheter-associated urinary tract infections due to Escherichia coli and Proteus mirabilis. *Clinical microbiology reviews,* **21,** 26-59.
4. Ronald, A. (2003). The etiology of urinary tract infection: traditional and emerging pathogens. *Disease-a-Month,* **49,** 71-82.
5. Schaffer, J. N. and Pearson, M. M. (2015). *Proteus mirabilis* and urinary tract infections. *Microbiology spectrum,* **3**.
6. Seguin, M. A., Vaden, S. L., Altier, C., Stone, E. and Levine, J. F. (2003). Persistent urinary tract infections and reinfections in 100 dogs (1989–1999). *Journal of veterinary internal medicine,* **17,** 622-631.
7. Sorlozano, A., Jimenez-Pacheco, A., Del Castillo, J. d. D. L., Sampedro, A., Martinez-Brocal, A., Miranda-Casas, C., Navarro-Marí, J. M. and Gutiérrez-Fernández, J. (2014). Evolution of the resistance to antibiotics of bacteria involved in urinary tract infections: a 7-year surveillance study. *American journal of infection control,* **42,** 1033-1038.

Case : 493
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Case report

Clinical history

This 63 years old male patient has history of prostatic enlargement. He suffered urinary retention off and on for months. He also suffered from urine frequency, urgency and hematuria. One week before admission he had acute retention of urine and came to our ER. Foley catheterization was done and referred to urosurgical OPD. Cystoscopy was arranged and blood clot tamponade was found. Therefore, he was admitted for further investigations and treatment. Serum Prostate-specific antigen (PSA) level was within normal limit and transurethral resection of prostate was performed. PSA-negative mucin-producing adenocarcinoma of prostate was found. MRI, colonoscopy, upper GI endoscopy and whole body bone scan did not show any evidence of colonic lesions nor visceral or lymph node metastases.

Gross examination

The specimen consisted of multiple pieces of soft tissue weighing 15 gm, fixed in formalin. Grossly, the specimen showed gray in color and soft in consistency.

Microscopic findings

Microscopically, the sections showed adenocarcinoma characterized by irregular neoplastic glands with lining epithelium neuclei elongation. Mucin production was prominent.

Differential diagnoses

- Mucinous adenocarcinoma of the prostate
- Ductal adenocarcinoma of prostate
- Nonurachal adenocarcinoma of the urinary bladder
- Metastasis adenocarcinoma of the colon
- Mucin-producing urothelial-type adenocarcinoma of the prostate

Discussion

Mucin-producing urothelial-type adenocarcinoma of the prostate (MPUAP), which is believed to originate from the prostatic urethra or the proximal prostatic duct, is an extremely rare neoplasm and only 23 cases have been previously reported in the English literature. The typical pathological findings are large mucin lakes lined by an atypical tall columnar epithelium. It is necessary to differentiate adenocarcinoma from other origins. Mucinous adenocarcinoma of the prostate reveals cords of cuboidal epithelium and cribriform glands with bland cytological characteristic of prostate carcinoma floating with mucin. Ductal adenocarcinoma consists of tall columnar cells arranged in papillary, cribriform and solid-patterns resembling MPUAP, but lacks extracellular mucin. Immunohistochemical staining (IHC) of these ductal prostatic adenocarcinomas shows positivity for PSA, PSAP, AMACR. Nonurachal adenocarcinoma of the urinary bladder is identical in its morphology and histogenesis to MPUAP, and the only way to distinguish the two entities is to rule out by location. Although adenocarcinoma of the colon is also morphologically identical to MPUAP, IHC is usually strong positive for CK20, and negative for PSA, PSAP, and AMACR. It is critical to distinguish it from mucinous acinar adenocarcinoma of the prostate and metastatic adenocarcinoma from either the bladder or colon. This is mainly because mucin-producing urothelial-type adenocarcinoma of the prostate has a different clinical behavior and treatment plan. Specifically, it has a more aggressive clinical course, and it is unresponsive to hormone therapy

References

1. Osunkoya AO, Epstein JI. Primary mucin-producing urothelialtype adenocarcinoma of

prostate: report of 15 cases. Am J Surg Pathol 2007; 31: 1323–9.
2. Chen YL, Chian JH, Hsiao PJ. Mucin-producing urothelial-type adenocarcinoma of the prostate as a mimicker of colonic adenocarcinoma: A case report and review of the literature. Int J Surg Pathol 2012; 20: 191–5.
3. Sebesta EM, Mirheydar HS, Parsons JK et al. Primary mucinproducing urothelial-type adenocarcinoma of the prostatic urethra diagnosed on TURP: A case report and review of literature. BMC Urol 2014; 14: 39.
4. Takashi Kawasaki, Toshihiro Saito, Katsunori Uchida et al A case of mucin-producing urothelial-type adenocarcinoma of the prostate showing immunoreactivity for NKX3.1, a specific marker of prostatic tissue. Pathology International 2017; 67: 483–484

Case Number：494
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CASE RESULT：

Histopathologic Findings：

Microscopically, the paratesticular mass showed pictures of transition between well differentiated liposarcoma to a non-lipogenic spindle cell sarcoma, composed of well-differentiated adipocytes interspersed by areas with ovoid to spindle cell proliferation. The well-differentiated liposarcoma showed low cellularity with scattered bland fusiform of rounded lipoblasts interspersed in the myxoid and delicate plexiform or arborizing capillary vascular network (chicken-wired) of the background enhanced cellularity at the periphery of the nodule. Mature adipocytes, atypical spindle cells, scattered multinucleated giant cells and multivacuolated lipoblasts were embedded in a loose myxoid to dense fibrous stroma. There also presented spindle cells hypercellular with mild pleomorphic with abundant cytoplasm, small clusters of cells with high N / C ratio, and spindled cells with elongated nuclei are short fascicles seen infiltrating in the periphery. The other part of the paratesticular mass demonstrated mosaic multiple non-lipogenic spindle cell sarcomatous feature showed predominately present spindle-shaped, round to ovoid cells of mild pleomorphic sarcomatous hypercellularity components with whorled formation of leiomyosarcomatous differentiated patterns and occupied approximately 10% of the whole tumor. There no area of hemorrhage, other heterologous elements, or necrosis was seen. The epididymus and testicular parenchyma show atrophic change with hypoplasia with no tumor involvement. The sections of the spermatic cord showed severe congestion and free from tumor involvement in the cut margin.

Pathological features showed characteristics of paratesticular dedifferentiated liposarcoma with leiomyosarcomatous differentiation. Testis, epididymis, spermatic cord, margins and cut ends of tumor showed free from tumor involvement.

Histochemistry and Immunohistochemistry：

The heterologous elements and solid fibrous pleomorphic sarcomatous components or spindle-shaped cellularity of leomyosarcomatous patterns showed positively histochemical Masson's trichrome, and also presented positively immunostaining for actin (αSMA), vimentin, desmin and CD34, negative for MDM2 and CDK4. Mature adipocytes, well-differentiated liposarcoma, scattered multinucleated giant cells and multivacuolated lipoblasts showed strongly positive immunostaining for MDM2, CDK2, S-100 protein, CD34, vimentin and focal positive for desmin, negatively for pan-CK, HMB45, EMA and Bcl-2.

Differential Diagnoses:

1. Aggressive angiomyxoma
2. Embryonal rhabdomyosarcoma
3. Pleomorphic liposarcoma
4. Soft tissue sarcomas (Leiomyosarcoma / Fibrosarcoma)
5. Malignant fibrous histiocytoma (MFH)

Diagnosis:
Left paratesticular dedifferentiated liposarcoma with leiomyomatous differentiation.

Follow-up and workup:

After surgery the patient was persisted underwent reevaluation, included sonography of right testis showed intact with no pathological findings. Metastatic work-up, which included CT of the abdomen and pelvis and chest X ray, did not reveal any distant metastasis. The CT of the thorax and abdomen of MRI was normal. The physical examination did not reveal any abnormalities or tumor recurrence. The patient was disease free after at the five and half a years follow-up.

Discussion:

Primary paratesticular tumors are extreme rare neoplasms only accounting for 7% to 10% of all intrascrotal tumors and with paratesticular sarcomas account for about 30% of all scrotal masses, particularly in the elderly. The mean age in these cases is 50 to 60 ranging from 16 to 82 years. Praratesticular liposarcoma (PTLP) is the most common type of genitourinary sarcomas in adults, and usually located in the spermatic cord, epididymis, or testis. PTLPS is usually located in the spermatic cord, epididymis, or testis (testicular tunics) (76%, 20%, and 4%, respectively). The etiology is still unknown and no evidence of a hereditary disorder causes. In adults, paratesticular tumors are more than 75% and arise from the spermatic cord, with 20% being liposarcomas. Up to date, approximately less than two hundred cases have been reported in the literature.

LPS is the most common type of sarcoma followed by leiomyosarcoma (LMS), rhabdomyosarcoma (RMS), undifferentiated pleomorphic sarcoma and fibrosarcoma. Liposarcomas (LPS) are classified according to WHO classification of soft-tissue tumors (2013) in four major subtypes include the atypical lipomatous tumor (ATLT)/well-differentiated liposarcoma (WDLPS represents 40 to 45%), dedifferentiated liposarcomas (DDLPS), myxoid liposarcoma (MLPS), and pleomorphic liposarcoma (PLPS). In 1940, Dreyfuss and Lubash illustrated the first documented liposarcoma of the spermatic cord in a 54-year-old male. Alyousef et al. (2013) demonstrated that PTLPS is a rare pathological entity making it difficult to have a universal consensus on the natural history and management even in large institutions.

Dedifferentiated LPS or histological progression to high-grade, less well differentiated neoplasm of soft tissue sarcomas was first described by Dahlin in 1971, is an extreme mixed histological subtype defined by the combination of well-differentiated liposarcoma and a high-grade nonlipogenic sarcoma of variable histological grade usually with histologically abrupt transition. PTLPS is described as histologically DDLPS is usually composed of atypical lipomatous tumor (ALT)/WDLPS areas and dedifferentiated components that usually intersperse spindle/pleomorphic cell high-grade sarcoma or myxoid/spindle cell low-grade sarcoma. Cell dedifferentiation, as a pathological process, confers a poorer prognosis and occurs in up to 10% of WDLPS.

Heterologous dedifferentiation may occur in about 5–10% of the cases with osseous metaplasia. Dedifferentiated areas rarely show heterologous differentiation with in low-grade mesenchymal tumors including myogenic, osteo- /chondrosarcomatous or angiosarcomatous elements. Moreover, the peculiar meningothelial-like whorling and metaplastic bone formation were also defined well-differentiated LPS juxtaposed to areas of high-grade nonlipogenic asrcoma as other elements of a fibrosarcoma or malignant fibrous histiocytoma. Leiomyosarcoma (LMS), rhabdomyosarcoma, chondrosarcoma, chondroma, and parosteal osteosarcom differentiation has also been reported in malignant mesenchymal tumor. Leiomyosarcomatous areas were also detected in the DDLPS cases that demonstrated the dominant spindle cell LPS as a homologous component fibrosarcoma-like lipoid neoplasm published by Deylup et al. in 2013. Different pathological elements of the leiomyosarcomatous differentiation, osteosarcomatous differentiation, and bone formation have been reported with a potential role in the overall prognosis.

In previously, only single well-documented cases of paratesticular dedifferentiated LPS with leiomyosarcomatous differentiation have been reported in the English literature [Evans HL et al (1990), Suster S. et al. (1993), Henricks et al (1997) , Flope AL. et al. (2002), Montogomery et al. (2003) Binh MB et al. (2007)]. Recently, Hatanaka K. et al. (2013) described that paratesticular dedifferentiated liposarcoma with leiomyosarcomatous differentiation is an extremely rare occurrence in WDLPS and DLPS. Unlu Y et al. (2015) that study supported the expansion of the definition of dedifferentiated liposarcoma to include tumors with low-grade dedifferentiation and also suggests that low-grade dedifferentiation represents a precursor lesion of high-grade dedifferentiation. Chondros K et al. (2015) reported a case with dedifferentiated PTLPS with osseous metaplasia of the spermatic cord.

Immunohistochemically (IHC) analysis is essential to reach a diagnosis. In LPSs, the most specific IHC marker is the S-100 protein, which is positive in 90% of cases; high grade LPSs are often positive for desmin, S-100 protein, vimentin, and protein CD34 are also expressed. Cytogenetics showed similar positivity of MDM2 and CDK4. Both MDM2 and CDK4 demonstrated that the most useful markers for confirming diagnosis of a well-differentiated liposarcoma, which show nuclear expression in both spindle cells and adipocytes cells. The intensity and extent of staining for these markers is greatest reflecting a greater degree of MDM2 amplification. Well differentiated and dedifferentiated family of LPSs demonstrates amplification of chromosome subregion 12q13-q15 with resultant amplification of MDM2 and CDK4 genes. MDM2 and CDK4 immunostainings, which correlate with gene amplification, are helpful adjuncts to differentiate ALT-WDLPS from benign adipose tumors and to separate DDLPS from poorly differentiated sarcomas. Dedifferentiated LPS may express desmin regardless of the presence or absence of a component of heterologous rhabdomyosarcomatous differentiation.

The clinical presentation of paratesticular dedifferentiated LPS is usually symptomatic, a painless, palpable large unilateral scrotal or inguinal mass. A differential diagnosis included the similar symptomatology with inguinal hernias or subcutaneous lipomas. Radiological evaluation is helpful for the diagnosis. Other clinical features, such as acute scrotum, are rather rare and an immediate surgical exploration is required. Tumor grade, stage, histological type, and lymph node involvement are independently predictive of prognosis.

Paratesticular dedifferentiated LPS should to require aggressive surgical approach for curative treatment with radical orchiectomy. Prognosis and survival vary in relation to histopathological classification. Dedifferentiated LPs have a poorer prognosis than well-differentiated ones, but are less aggressive than high-grade sarcomas. No consensus with regard to regional lymph node excision has been reached, radiotherapy and chemotherapy. Clinically, the risk of local recurrence is not affected by leiomyosarcomatous differentiation in DLPS, although the metastatic rate is relatively low compared to that of leiomyosarcoma. The prognosis of patients with DLPS with leiomyosarcomatous differentiation is better than the conventional leiomyosarcoma. Five-year survival rates of paratesticular LPS range from 20% to 80% while the long-term survival of men with all paratesticular sarcomas is approximately 50%. The reported recurrence rate ranges between 46% and 57%.

An intensive follow-up should be scheduled consequently by CT scan with IV contrast is an excellent radiological study for diagnosis. Radiologic evaluation with CT or MRI is highly recommended at least every 3 to 6 months for the first 3 years. Regardless of initial therapy, the risk of local recurrence and subsequent increase in grade always necessitates long-term follow-up.

Conclusion:

Dedifferentiated liposarcoma is a high-grade nonlipogenic sarcoma that arises in a background of a preexisting well-differentiated liposarcoma. In presented patient had a paratesticular DDLPS with low-grade leiomyosarcomatous differentiation that underwent radical orchiectomy with negative surgical margins. Prognosis is unrelated to the grade or extent but is related with mitotic activity of the dedifferentiated area.

References:

1. Lioe TF, Biggart JD: Tumors of the spermatic cord and paratesticular tissue. A clinicopathological study. Br J Urol 71:600–606, 1993.
2. Jo VY, Fletcher CDM: "WHO classification of soft tissue tumors: an update based on the 2013 (4th) edition," Pathology, vol. 46, no. 2, pp. 95–104, 2014.
3. Herbert PA: Urological Pathology. 1st ed. Philadelphia, Pa: Lea & Febiger; 1952.
4. Littles JF, Matter RC, Herman G, Michigan AA: Paratesticular liposarcoma: A report of two cases and review of the literature. J Natl Med Assoc 84:951-955. 1992.
5. Dahlin DC, Beabout JW: Dedifferentiation of low-grade chondro- sarcomas. Cancer 28:461–466, 1971
6. Montgomery E, Fisher C: Paratesticular liposarcoma: a clinicopathologic study. Am J Surg Pathol 27:40–47, 2003.
7. Henricks WH, Chu YC, Goldblum JR, Weiss SW: Dedifferentiated liposarcoma: a clinicopathological analysis of 155 cases with a proposal for an expanded definition of dedifferentiation. Am J Surg Pathol 21:271–281, 1997.
8. Coleman J, Brennan MF, Alektiar K, Russo P: "Adult spermatic cord sarcomas: management and results," Ann Surg Oncol, vol. 10, no. 6, pp. 669–675, 2003.
9. Fitzgerald S, MacLennan GT: "Paratesticular liposarcoma," J Urol, vol. 181, no. 1, pp. 331–332, 2009.
10. Galosi AB., Scarpelli M., Mazzucchelli R. et al: "Adult primary paratesticular mesenchymal tumors with emphasis on a case presentation and discussion of spermatic cord leiomyosarcoma," Diagn Pathol, vol. 9, no. 1, article no. 90, 2014.
11. Littles Jr JF, Matter RC, Herman G: "Paratesticular liposarcoma: a report of two cases and review of the literature," J Nat Med Association, vol. 84, no. 11, pp.951–955, 1992.
12. Montgomery E, Fisher C: "Paratesticular liposarcoma: a clinicopathologic study," Am J Surg Pathol, vol. 27, no. 1, pp. 40–47, 2003.
13. Unlu Y, Erdem EH, Ozyalvacli G, Zengin M, Koca SB, Yucetas U, Bozkurt E, Behzatoglu K: Paratesticular sarcomas: A report of seven cases. Oncol Lett. Jan; 9(1): 308–312, 2015.
14. Sun W, Sun X, Cao D: "Dedifferentiated liposarcoma of the retroperitoneum with osteosarcomatous component,"Clinics & Practice, vol. 2, no. 2, 2012.
15. Pilotti S, Pierotti MA: Well-differentiated liposarcoma with leiomyomatous differentiation. Am J Surg Pathol 26:1643–1644, 2002.
16. Hatanaka K, Yoshioka T, Tasaki T, Tanimoto A: "Paratesticular dedifferentiated liposarcoma with leiomyosarcomatous differentiation: a case report with a review of literature," Diagn Pathol, vol. 8, no. 1, article 142, 2013.
17. Alyousef H, Osman EM, Gomha MA: Paratesticular Liposarcoma: A Case Report and Review of the Literature, 2013.
18. Ulbright, "Ulbright TM: testicular, paratesticular tumors," in Sternberg's Diagnostic Surgical Pathology, S. E. Mills, J. K. Greenson, H. A. Oberman et al., Eds., pp. 2168–2190, Lippincott Williams & Wilkins, Philadelphia, Pa, USA, 4th edition, 2004.
19. Binh MB1, Sastre-Garau X, Guillou L, de Pinieux G, Terrier P, Lagacé R, Aurias A, Hostein I, Coindre JM: MDM2 and CDK4 immunostainings are useful adjuncts in diagnosing

well-differentiated and dedifferentiated liposarcoma subtypes: a comparative analysis of 559 soft tissue neoplasms with genetic data. Am J Surg Pathol 29:1340-7, 2005.
20. Thway K1, Flora R, Shah C, Olmos D, Fisher C: Diagnostic utility of p16, CDK4, and MDM2 as an immunohistochemical panel in distinguishing well-differentiated and dedifferentiated liposarcomas from other adipocytic tumors. Am J Surg Pathol 36:462-9, 2012.
21. Adachi T, Oda Y, Sakamoto A, Terashi T, Tamiya S, Hachitanda Y, Tsuneyoshi M: Prognostic factors in the so-called malignant mesenchymoma: a clinicopathological and immunohistochemical analysis. Oncol Rep 10:803-11, 2003.
22. Folpe AL, Weiss SW: Lipoleiomyosarcoma (well-differentiated liposarcoma with leiomyosarcomatous differentiation): a clinicopathologic study of nine cases including one with dedifferentiation. Am J Surg Pathol 26:742-9, 2002.
23. Suzuki M, Fukuchi M, Sakurai S, Naitoh H, Kiriyama S, Fukasawa T, Tabe Y, Yamauchi H, Yoshida T, Kuwano H: Retroperitoneal liposarcoma with leiomyosarcomatous differentiation. Int Surg 99:48-51, 2014.
24. Tajima S, Koda K: Paratesticular dedifferentiated liposarcoma with prominent myxoid stroma: report of a case and review of the literature. Med Mol Morphol 50:112–116, 2017.
25. Marwen Benna M, Zarraâ S, Belati A, Cherif A, Kochbati L, Mohammed Chebil M, Benna F: Rare Case of a well-differentiated paratesticular sarcoma of the spermatic cord in a 60-year-old patient. Hindawi Case Reports in Urology Volume 2017.
26. Gabriele R, Ferrara G, Tarallo MR, Giordano A, Gori AD, Izzo L, Conte M: Recurrence of paratesticular liposarcoma: a case report and review of the literature. World J Surg Oncol 12:276, 2014.
27. Evans HL: Smooth muscle in atypical lipomatous tumors. Am J Surg Pathol 14:714–718, 1990.
28. Suster S, Wong TY, Moran CA: Sarcomas with combined features of liposarcoma and leiomyosarcoma: study of two cases of an unusual soft-tissue tumor showing dual lineage differentiation. Am J Surg Pathol 17:905–911, 1993.

Case Number: 495

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CASE HISTORY

Signalment:

An 8-year-old castrated male Miniature Pinscher

Clinical History:

An 8-year-old castrated male Miniature Pinscher presented with hematuria and elevated renal indices for more than 1 month. A left sided renal mass was noted on abdominal radiography and ultrasonography. Swelling of the gingiva was noted shortly afterwards. Both the abdominal and gingival masses were excised after a blood transfusion for severe anemia.

Gross Findings:

Grossly, the renal mass, measured 12 x 12 x 13 cm in size, and was a partially encapsulated irregular solid mass with obvious nodular protrusions. The texture was firm and the color was generally white with dark red mottling and irregular depressions. The small-sized specimens from the gingiva, measuring 0.5 x 0.7 x 1 cm, were irregular in shape, beige to tan with dark red spots, and firm.

CASE RESULT

Histopathologic Findings:

Microscopic examination revealed a partially encapsulated, poorly demarcated, and lobulated invasive neoplasm replacing and compressing the renal parenchyma. The neoplasm was composed of a disorganized mixture of three distinct elements, mainly blastemal elements with minor epithelial or mesenchymal differentiation. The blastemal element was composed of polygonal neoplastic blastemal cells arranged in sheets, nests, and ribbons. These cells had a scant amount of indistinctly bordered eosinophilic cytoplasm, and contained a round to oval vacuolar nucleus with indistinct nucleoli. The epithelial element was composed of cuboidal to columnar cells arranged in infolded tubules and occasional projected tufts into lumina, forming “primitive glomeruli”. Separating and surrounding the aforementioned two elements was the mesenchymal component of spindle cells loosely arranged in poorly delineated streams. The mitotic rates of the neoplastic blastema, epithelial, and mesenchymal cells were 7-8, < 1, and < 1 per 400× field, respectively. There were multiple areas of hemorrhagic necrosis, corresponding to the dark red foci and depression seen grossly. The gingiva masses shared histological features similar to those of the primary renal nephroblastoma, suggestive of a distant metastasis.

Morphological Diagnosis:

1. Renal nephroblastoma, blastema-predominant, renal mass
2. Carcinoma, histogenesis undetermined, gingival mass

Differential Diagnosis:

The differential diagnosis of gingiva mass includes primary gingival tumor and metastatic neoplasm from renal mass.

Immunohistochemical (IHC) staining:

To identify the origin of the renal and gingival masses, IHC for cytokeratin (CK), vimentin, and PAX-8 was performed. All of the internal controls from the normal feline tissues for the monoclonal antibodies used in the present case were positive, indicative of good quality of IHC staining for targeted cell markers. Neoplastic cells from both the kidney and gingiva showed similar

positive patterns for CK, vimentin, and PAX-8. Some foci of the blastemal cells were positive for CK. Most areas showed positivity for vimentin and PAX-8 (Figs. 4 A, B, C). These results are consistent with the gingival neoplasm being a metastasis of the renal nephroblastoma.

Final Diagnosis:
Renal nephroblastoma, blastema-predominant with metastasis to gingiva, renal mass

DISCUSSION

Three cell types, epithelial, mesenchymal, and blastemal, are present in a classic "triphasic" nephroblastoma. Renal nephroblastomas tend to occur in juvenile dogs;[3] however, a variety of cases typically affect middle-aged dogs of median age of 8 years, generally without breed or sex predilection.[3,5,15,17] One or both kidneys may be affected by nephroblastomas, and both kidneys can be fused into a single large mass.[2,5,13,22] Ectopic foci of nephroblastomas involving the spinal cord may also be an origin of the neoplasm (spinal nephroblastomas).[2,5,13,22] Spinal nephroblastomas commonly occur in dogs from 6 months to 7 years of age and are thought to originate from the metanephric blastema or from a persistent nephrogenic rest that are trapped in the dura during development.[2,9,13,22]

Half of previous canine cases of renal nephroblastoma have widespread metastases, and metastatic sites may include the contralateral kidney, lung, liver, adrenal, ovary, thymus, mesentery, lymph nodes, thyroid, spinal cord, and bone.[3,4,9,15,17,20] To the authors' knowledge, this is the first report of gingiva metastasis from a primary renal nephroblastoma. This gingival nephroblastoma was further confirmed by positive immunoreactivity with PAX-8, indicative of a renal origin (Fig. 4). PAX-8-positive tumors may be of renal, Mullerian, thymic, and thyroid origin.[12,18] In the present case, the major blastemal element readily ruled out those non-renal origins. The similar expression pattern of CK, vimentin, and PAX-8 between masses of both locations was also supportive of its renal origin. The metastasis most likely occurred hematogenously, which is suggested by emboli of neoplastic cells in the renal vasculature and severely dilated vascular lumens in the superficial lamina propria of the gingiva.

A previously reported blastema-predominant canine nephroblastoma had the blastemal element but lacked the glomeruloid-like structures.[21] In the present case, blastemal cells expressed both vimentin and scattered CK markers, implicating an antigenic shift from vimentin to CK and resembling the mesenchymal-epithelial transition (blastemal to tubular or glomerular) that occurs in normal organogenesis.[19] In humans, the presence of nephrogenic rests (NRs), which are foci of persistent nephrogenic cells resembling those of the developing kidney, represents failure maturation of fetal tissue to normal renal parenchyma and has been considered as a precursor lesion of renal nephroblastoma.[1,14] The NRs can be categorized into perilobar (located at the periphery of the renal lobes with predominance of blastemal cells) and intralobar (located in the cortex or medulla of the renal lobe with predominance of stroma element), and may be single, multiple, or diffuse.[1,6,7,14] Furthermore, multiple or diffuse NRs are also called as nephroblastomatosis.[7,14] NRs can be classified by their histologic feature as 1) dormant or nascent, 2) maturing, sclerosing, and obsolescent, 3) hyperplastic, and 4) neoplastic.[1,7,13] Dormant or nascent NRs are small-sized and composed of blastema with extremely rare mitotic figures, and maturing, sclerosing, and obsolescent NRs usually show differentiation into stromal and epithelial cells with hyalinization of stroma.[7] The hyperplastic NRs are usually macroscopic lesions with nodular growth pattern and composed of blastemal, embryonic, or sclerosing regions.[7] Neoplastic NRs can be subclassified into adenomatous and nephroblastomatous types, and are thought to give rise to or synonymous with nephroblastoma.[1,7,14]
Histopathological features (favorable or unfavorable) and clinical stages (from I to V) are the two most significant prognostic factors in human renal nephroblastomas.[10,11,16] Tubular and glomerular

differentiation indicates a good prognosis, whereas anaplasia and sarcomatous stroma are associated with metastasis and poor prognosis.[5,11,16] Anaplasia is present in about 5% of human renal nephroblastomas with focal or diffuse distribution in histology. To identify unfavorable histology (Table 1),[17] three criteria have to be met: 1) nuclei enlarged to at least 3 times the size of adjacent nuclei of the same cell type; 2) marked hyperchromasia of the enlarged nuclei; 3) multipolar mitotic figures, in contrast to bipolar mitotic figures in normal cell division. The present case did not match these features of anaplasia. However, the blastemal cells were primitive and mitotically active with aggressive growth, signifying a higher risk of malignancy.[11] The present case was classified as stage IV with favorable histology due to the hematogenous metastasis to gingiva but a lack of histological anaplasia. The present animal was found dead in a follow-up conducted 4 months later, without necropsy, so the exact survival time is unknown. Even so, our meta-analysis by using previously reported cases of canine renal nephroblastomas[4,8,9,15-17,20,21,23] suggests clinical staging was significantly correlated with survival time (P=0.0143, Log-rank (Mantel-Cox) test; GraphPad Software, CA, USA; n=10), but there was no statistically significant correlation between histopathological features and survival time (P=0.9002, Log-rank (Mantel-Cox) test; GraphPad Software, CA, USA; n=10). Other factors include the age of onset (pediatric patients tend to have poorer prognosis), tumor size and rate of growth, pathologic subtypes, complete or incomplete resection of kidney or accompanied ureter or regional lymph nodes, therapy protocol, postoperative care, side-effects of therapy and surgery, paraneoplastic syndromes, concurrent neoplasia, etc. may independently or interactively influence the outcome of survival time.

REFERENCE

1 Beckwith JB, Kiviat NB, Bonadio JF: Nephrogenic rests, nephroblastomatosis, and the pathogenesis of Wilms' tumor. Pediatr Pathol **10:** 1-36, 1990

2 Brewer DM, Cerda-Gonzalez S, Dewey CW, Diep AN, Van Horne K, McDonough SP: Spinal cord nephroblastoma in dogs: 11 cases (1985-2007). J Am Vet Med Assoc **238:** 618-624, 2011

3 Bryan JN, Henry CJ, Turnquist SE, Tyler JW, Liptak JM, Rizzo SA, Sfiligoi G, Steinberg SJ, Smith AN, Jackson T: Primary renal neoplasia of dogs. J Vet Intern Med **20:** 1155-1160, 2006

4 Caywood: Hypertrophic ostheoarthropathy associated with an atypical nephroblastoma in a dog.

5 Cianciolo RE MF: Renal neoplasia A2 - Maxie, M. Grant. *In*: Jubb, Kennedy & Palmer's Pathology of Domestic Animals (Fifth Edition), pp. 498-503. Elsevier, Edinburgh, 2007

6 Cox SG, Kilborn T, Pillay K, Davidson A, Millar AJ: Magnetic resonance imaging versus histopathology in Wilms tumor and nephroblastomatosis: 3 examples of noncorrelation. J Pediatr Hematol Oncol **36:** e81-84, 2014

7 Eble JN, Grignon DJ, Young RH: Tumors of the Urinary Tract. *In*: Diagnostic Histopathology of Tumors, ed. Fletcher C, 4 ed., pp. 559-657. 2013

8 Frimberger AE, Moore AS, Schelling SH: Treatment of nephroblastoma in a juvenile dog. J Am Vet Med Assoc **207:** 596-598, 1995

9 Gasser AM, Bush WW, Smith S, Walton R: Extradural spinal, bone marrow, and renal nephroblastoma. J Am Anim Hosp Assoc **39:** 80-85, 2003

10 Izawa JI, Al-Omar M, Winquist E, Stitt L, Rodrigues G, Steele S, Siemens DR, Luke PP: Prognostic variables in adult Wilms tumour. Can J Surg **51:** 252-256, 2008

11 Kaste SC, Dome JS, Babyn PS, Graf NM, Grundy P, Godzinski J, Levitt GA, Jenkinson H: Wilms tumour: prognostic factors, staging, therapy and late effects. Pediatr Radiol **38:** 2-17, 2008

12 Laury AR, Perets R, Piao H, Krane JF, Barletta JA, French C, Chirieac LR, Lis R, Loda M, Hornick JL, Drapkin R, Hirsch MS: A comprehensive analysis of PAX8 expression in human epithelial tumors. Am J Surg Pathol **35:** 816-826, 2011

13 Liebel FX, Rossmeisl JH, Jr., Lanz OI, Robertson JL: Canine spinal nephroblastoma: long-term outcomes associated with treatment of 10 cases (1996-2009). Vet Surg **40:** 244-252, 2011
14 Lonergan GJ, Martinez-Leon MI, Agrons GA, Montemarano H, Suarez ES: Nephrogenic rests, nephroblastomatosis, and associated lesions of the kidney. Radiographics **18:** 947-968, 1998
15 Martin KDJ, Sarangom SB, Krishna BND, Nair ND, Pillai UN, Philip SB, Kankonkar AP: Renal nephroblastoma in an adult dog - a case report. Veterinarski Arhiv **84:** 85-96, 2014
16 Montinaro V, Boston SE, Stevens B: Renal nephroblastoma in a 3-month-old golden retriever. Can Vet J **54:** 683-686, 2013
17 Nakayama H, Hayashi T, Takahashi R, Fujiwara K: Nephroblastoma with liver and lung metastases in an adult dog. Nihon Juigaku Zasshi **46:** 897-900, 1984
18 Peat TJ, Edmondson EF, Miller MA, DuSold DM, Ramos-Vara JA: Pax8, Napsin A, and CD10 as Immunohistochemical Markers of Canine Renal Cell Carcinoma. Vet Pathol **54:** 588-594, 2017
19 Rivera MN, Haber DA: Wilms' tumour: connecting tumorigenesis and organ development in the kidney. Nat Rev Cancer **5:** 699-712, 2005
20 Seaman RL, Patton CS: Treatment of renal nephroblastoma in an adult dog. J Am Anim Hosp Assoc **39:** 76-79, 2003
21 Simpson RM, Gliatto JM, Casey HW, Henk WG: The histologic, ultrastructural, and immunohistochemical features of a blastema-predominant canine nephroblastoma. Vet Pathol **29:** 250-253, 1992
22 Traslavina RP, Aleman M, Affolter VK, LeCouteur RA, Ramsamooj R, Higgins RJ: Pathology in practice. Spinal cord (ectopic) nephroblastoma in a dog. J Am Vet Med Assoc **242:** 1661-1663, 2013
23 Umeda M, Akashi T, Suzuki H, Tanizawa K, Sugiyama M, Isoda M: Cystic nephroblastoma of an aged dog. Vet Pathol **22:** 84-85, 1985

Case Number: 496

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CASE HISTORY:

Signalment:

An 11-year-old male poodle was presented on April 3rd, 2017 with a left inguinal subcutaneous cryptorchid testicle which had slowly enlarged. Physical examination revealed a large left cryptorchid testicle (4.1x2.4x1.2cm) and an unremarkable right testicle (1.5x0.9x0.9cm). Mild systemic hypertension (sBP=160mmHg) was noted. Auscultation revealed left-sided grade II/IV systolic murmur and mild arrhythmia, radiography revealed enlargement of cardiac silhouette, and echocardiogram revealed mitral and tricuspid regurgitation.

Clinical Pathology:
A complete blood count profile was unremarkable. Serum biochemistry profile revealed an increased activity of the liver enzymes alanine aminotransferase (116 U/L, normal range 3-50 U/L) and total protein (7.4 g/dL, normal range 4.8-6.6 g/dL). Other blood parameters were in the reference ranges.

Gross Findings:
Received in formalin are two testicles measuring 3.5 x 3 x 2.5 cm (left testis) and 1.5 x 1.2 x 1 cm (right testis). Capsular vessels of the left testis are engorged and torturous. Varisized white and mottled nodules, cavities and hemorrhagic areas efface the left testicular parenchyma. The ratio of the size of the right testis to epididymis is mildly smaller. The cut surface of the right testis is unremarkable.

CASE RESULT

Histopathological Findings:
Testis, left: Expanding the testicular parenchyma are discrete neoplastic nodules separated by thick fibrous septa. Some nodules consist of neoplastic seminoma cells distending the seminiferous tubules and mixed with variable numbers of lymphocytes and neutrophils. The cells are characterized by round cells with scant cytoplasm, large vesicular nuclei, coarse lacy chromatin and prominent nucleoli. Frequent mitoses are seen. There is marked anisocytosis and anisokaryosis. Multinucleated tumor giant cells are common. The seminoma cells are negative for cytokeratin (CK), CD117, CD30 and inhibin-alpha, but mildly express vimentin protein in a perinuclear spotty fashion.

Other nodules are composed of neoplastic Sertoli cells that are either confined to seminiferous tubules in palisades or arranged into broad sheets effacing the architecture. The cells are spindle to elongate in shape with indistinct cell boundaries, oval vesicular nuclei, a prominent nucleolus, and small amounts of eosinophilic cytoplasm. Clear vacuoles (lipid droplets) are occasionally observed in the cytoplasm. Focally, intermingled seminoma and Sertoli cells are concurrently present in the same seminiferous tubules. Tumor cells are positive for inhibin-alpha and vimentin, and negative for CK, CD117 and CD30.

Multifocally, there are atypical, elongate neoplastic cells in a tubular arrangement. The nuclei are round and basally situated. They are intimately intermixed with Sertoli cells and abut on the fibrous septa. Immunohistochemically, these tumor cells are strongly positive for CK, variably positive for vimentin and CD117, and negative for NSE, CD30 and inhibin-alpha.

Within the lymphatic and venular vessels are frequent emboli of tumor cells presumably consisting of both seminoma cells (vimentin negative) and Sertoli cells (vimentin positive). Additionally, multifocal areas of coagulation necrosis and chronic hemorrhage are seen in the tumor.

Testis, right: Approximately 50% of the seminiferous tubules lack spermatozoa and contain fewer spermatids and spermatocytes; some tubules are solely lined by a single layer of Sertoli cells along with sparse spermatogonia. The testicular capsule becomes wrinkled.

Pathological Diagnosis:
Testis, left: Malignant mixed germ cell–sex cord stromal tumor (spermatocytic germinoma and Sertoli cell tumor), with angiolymphatic invasion.

Testis, right: Germ cell atrophy, multifocal, moderate.

Discussion:
Testicular mixed germ cell sex cord-stromal tumors (MGSCTs) are rare in adult men and dogs. In a review of 262 canine testicular tumors, 7% were MGSCTs characterized by a combination of neoplastic germ cells and Sertoli cells intimately admixed with each other, except one tumor that had an interstitial cell tumor and an intratubular seminoma. MGSCTs should be distinguished from a "collision tumor" which is defined as two primary tumors coexisting within a single location without histological interminglement.

According to prior version of the World Health Organization (WHO) classification of the male genital published in 2004, human seminomas are classified as two clinically and microscopically distinct tumors: classical seminoma (SE) and spermatocytic seminoma (SS). SEs are the predominant type of seminoma, affecting young men and originating from transformed gonocytes (prespermatogonia and spermatogonia). They are malignant with a high incidence of metastasis. In contrast, SSs are a rare disease, more common in older adults and derived from more differentiated germ cells, mostly spermatocytes. Microscopically, SEs are composed of a fairly uniform population of large cells with lymphocytic and/or granulomatous inflammatory infiltrates. Tumor cells show immunoreactivity to placental alkaline phosphatase (PALP) and have intracytoplasmic glycogen that can be revealed by positive periodic acid–Schiff (PAS) staining. SSs are characterized by three cell types: small, medium and large cells. Rare multinucleated cells may be present. Tumor cells often have typical filamentous spireme-like lacy chromatin similar to that seen in spermatocytes. PALP expression and PAS-positive cytoplasmic glycogen are not the features of SSs. Recent studies showed that nearly all canine seminomas are histopathologically and immunohistochemically compatible with SSs with a favorable prognosis. The incidence of canine SE remains to be elucidated because some studies demonstrated its rarity whereas others stated it may represent up to half of all canine seminomas.

MGSCTs are usually benign and can be cured by complete surgical excision, resembling seminoma and Sertoli cell tumors. Symptoms associated with hyperestrogenism are not common. In the current case, malignancy was assumed on the basis of disseminated tumor emboli within lymphatic and venular vessels. However, no sign of recurrence or metastasis had been observed by the owners at the time of this writing.

References:
8. Agnew, D. W., & MacLachlan, N. J. (2017). Tumors of the Genital Systems. *Tumors in Domestic Animals*, 689-722.
9. Hohšteter, M., Artuković, B., Severin, K., Kurilj, A. G., Beck, A., Šoštarić-Zuckermann, I. C.,

& Grabarević, Ž. (2014). Canine testicular tumors: two types of seminomas can be differentiated by immunohistochemistry. *BMC veterinary research*, *10*(1), 169.
10. Mizukami, S., Murakami, T., Tanaka, T., Machida, N., Nomura, K., Yoshida, T., & Shibutani, M. (2016). Spermatogonial Nature of the Germ Cell Component of Canine Testicular Mixed Germ Cell–Sex Cord Stromal Tumours. *Journal of comparative pathology*, *155*(1), 5-14.
11. Patnaik, A. K., & Mostofi, F. K. (1993). A clinicopathologic, histologic, and immunohistochemical study of mixed germ cell-stromal tumors of the testis in 16 dogs. *Veterinary pathology*, *30*(3), 287-295.
12. Aggarwal, N., & Parwani, A. V. (2009). Spermatocytic seminoma. *Archives of pathology & laboratory medicine*, *133*(12), 1985-1

中華民國比較病理學會章程

第一章　總則

第一條　本會定名為中華民國比較病理學會，英文名稱為 Chinese Society of Comparative Pathology (CSCP) (以下簡稱本會)。

第二條　本會依內政部人民團體法設立，為非營利目的之社會團體，以結合人類醫學與動物醫學資源，提倡比較病理學之研究與發展，交換研究教學心得，聯絡會員友誼及促進國際間比較醫學之交流為宗旨。

第三條　本會以全國行政區域為組織區域，會址設於主管機關所在地區，並得報經主管機關核准設主分支機構。前項分支機構組織簡則由理事會擬訂，報請主管機關核准後行之。會址及分支機構之地址於設置及變更時應報請主管機關核備。

第四條　本會之任務如左：

一、　提倡比較病理學之研究與發展。

二、　舉辦學術演講會、研討會及相關訓練課程。

三、　建立國內比較醫學相關資料庫。

四、　發行比較病理學相關刊物。

五、　促進國內、外比較醫學之交流。

六、　其他有關比較病埋學術發展之事項。

第五條　本會之主管機關為內政部。目的事業主管機關依章程所訂之宗旨與任務，主要為行政院衛生署及農業委員會，其目的事業應受各該事業主管機關之指導與監督。

第二章　會員

第六條　本會會員申請資格如下：

一、　一般會員：贊同本會宗旨，年滿二十歲，具有國內外大專院校(或同等學歷)生命科學及其它相關科系畢業資格或高職畢業從事生命科學相關工作滿兩年者。

二、　學生會員：贊同本會宗旨，在國內、外大專院校生命科學或其它相關科系肄業者 (檢附學生身份證明)。

三、　贊助會員：贊助本會工作之團體或個人。

四、　榮譽會員：凡對比較病理學術或會務之推展有特殊貢獻，經理事會提名並經會員大會通過者。

前項一、二、三項會員申請時應填具入會申請書，經一般會員二人之推薦，經理事會通過，並繳納會費。學生會員身份改變成一般會員時，得再補繳一般會員入會費之差額後，即成為一般會員，榮譽會員免繳入會費與常年會費。

第七條　一般會員有表決權、選舉權、被選舉與罷免權，每一會員為一權。贊助會員、學生會員與榮譽會員無前項權利。

第八條　會員有遵守本會章程、決議及繳納會費之義務。

第九條　會員有違反法令、章程或不遵守會員大會決議時，得經理事會決議，予以警告或停權處分，其危害團體情節重大者，得經會員大會決議予以除名。

第十條　會員喪失會員資格或經會員大會決議除名者，即為出會。

第十一條　會員得以書面敘明理由向本會聲明退會。但入會費與當年所應繳納的常年會費不得申請退費。

第三章　組織及職員

第十二條　本會以會員大會為最高權力機構。

第十三條　會員大會之職權如下：

一、　訂定與變更章程。

二、　選舉及罷免理事、監事。

三、　議決入會費、常年會費、事業費及會員捐款之方式。

四、　議決年度工作計畫、報告、預算及決算。

五、　議決會員之除名處置。

六、　議決財產之處分。

七、　議決本會之解散。

八、　議決與會員權利義務有關之其他重大事項。

前項第八款重大事項之範圍由理事會訂定之。

第十四條　本會置理事十五人，監事五人，由會員選舉之，分別成立理事會、監事會。

選舉前項理事、監事時，依計票情形得同時選出候補理事五人，候補監事一人，遇理事或監事出缺時，分別依序遞補之。

本屆理事會得提出下屆理事及監事候選人參考名單。

第十五條　理事會之職權如下：

一、　審定會員之資格。

二、　選舉及罷免常務理事及理事長。

三、　議決理事、常務理事及理事長之辭職。

四、　聘免工作人員。

五、　擬訂年度工作計畫、報告、預算及決算。

六、　其他應執行事項。

第十六條　理監事置常務理事五人，由理事互選之，並由理事就常務理事中選舉一人為理事長。

理事長對內綜理監督會議，對外代表本會，並擔任會員大會、理事會主席。

理事長因事不能執行職務時，應指定常務理事一人代理之，未指定或不能指定時，由常務理事互推一人代理之。

理事長或常務理事出缺時，應於一個月內補選之。

第十七條　監事會之職權如左：

一、監察理事會工作之執行。

二、審核年度決算。

三、選舉及罷免常務監事。

四、議決監事及常務監事之辭職。

五、其他應監察事項。

第十八條　監事會置常務監事一人，由監事互選之，監察日常會務，並擔任監事會主席。

常務監事因事不能執行職務時，應指定監事一人代理之，未指定或不能指定時，由監事互推一人代理之。監事會主席（常務監事）出缺時，應於一個月內補選之。

第十九條　理事、監事均為無給職，任期三年，連選得連任。理事長之連任以一次為限。

第二十條　理事、監事有下列情事之一者，應即解任：

一、喪失會員資格。
二、因故辭職經理事會或監事會決議通過者。
三、被罷免或撤免者。
四、受停權處分期間逾任期二分之一者。

第二十一條　本會置祕書長一人，承理事長之命處理本會事務，令置其他工作人員若干人，由理事長提名經理事會通過後聘免之，並報主管機關備查。但祕書長之解聘應先報主管機關核備。
前項工作人員不得由選任之職員（理監事）擔任。
工作人員權責及分層負責事項由理事會令另定之。

第二十二條　本會得設各種委員會、小組或其它內部作業組織，其組織簡則由理事會擬定，報經主機關核備後施行，變更時亦同。

第二十三條　本會得由理事會聘請無給顧問若干人，其聘期與理事、監事之任期同。

第四章　會議

第二十四條　會員大會分定期會議與臨時會議兩種，由理事長召集，召集時除緊急事故之臨時會議外應於十五日前以書面通知之。定期會議每年召開一次，臨時會議於理事會過半數認為必要，或經會員五分之一以上之請，或監事會半數函請召集時召開之。

第二十五條　會員不能親自出席會員大會時，得以書面委託其他會員代理，每一會員以代理一人為限。

第二十六條　會員大會之決議，以出席人數過半之同意行之。但章程之訂定與變更、會員之除名、理事及監事之罷免、財產之處置、本會之解散及其他與會權利義務有關之重大事項應有出席人數三分之二以上同意。但本會如果辦理法人登後，章程之變更應以出席人數四分之三以上之同或全體會員三分之二以上書面之同意行之。

第二十七條　理事會及監事會至少每六個月各舉行會議一次，必要時得召開聯席會議或臨時會議。
前項會議召集時除臨時會議外。應於七日以以書面通知，會議之決議各以理事、監事過半數之出席，出席人較多數之同意行之。

第二十八條　理事應出席理事會議，監事應出席監事會議，不得委託出席；理事、監事連續二次無故缺席理事會、監事會者，視同辭職。

第五章　經費及會計

第二十九條　本會經費來源如下：
一、入會費：一般會員新台幣壹仟元，學生會員壹佰元，贊助會員伍仟元，於入會時繳納。
二、常年會費：一般會員新台幣壹仟元，學生會員壹佰元。
三、事業費。
四、會員捐款。
五、委託收益。
六、基金及其孳息。
七、其他收入。

第三十條　本會會計年度以國曆年為準，自每年一月一日起至十二月三十一日止。

第三十一條　本會每年於會計年度開始前二個月由理事會編造年度工作計劃、收支預算表、員工待遇表，提會員大會通過（會員大會因故未能如期召開者，先提理監事聯席會議通過），於會計年度開始前報主管機關核備，並於會計年度終了後二個月內由理事會編造年度工作報告、收支決算表、現金出納表、資產負債表、財產目錄及基金收支表，送監事會審核後，造具審核意見書送還理事會，提會員大會通過，於三月底前報主管機關核備（會員大會未能如期召開者，需先報主管機關備查）。

第三十二條　本會解散後，剩餘財產歸屬所在地之地方自治團體或主管機關指定之機關團體所有。

第三十三條　本章程未規定事項，悉依有關法令規定辦理。

第三十四條　本章程經大會通過，報經主管機關核備後施行，變更時亦同。

第三十五條　本章程經本會民國八十五年二月四日第一屆第一次會員大會通過，並報經內政部 85 年 3 月 14 日台(85)內社字第 8507009 號函准予備查。

中華民國比較病理學會 第八屆理監事簡歷冊

序號	職別	姓名	性別	學歷	經歷	現任本職
1	理事長	許永祥	男	國立台大醫學院病理研究所碩士	台大醫院病理科住院醫師	慈濟醫院病理科主任教授
2	常務理事	劉振軒	男	美國加州大學戴維斯校區比較病理學博士	國立臺灣大學獸醫專業學院院長	台灣大學分子暨比較病理生物學研究所教授
3	常務理事	施洽雯	男	國立國防醫學院病理研究所	中山醫學院病理科副教授	羅東博愛醫院病理科主任
4	常務理事	鄭謙仁	男	美國北卡羅萊納州立大學博士	台灣大學獸醫學系教授兼所長	台灣大學獸醫學系教授
5	常務理事	邱慧英	女	國立台大獸醫專業學院博士	台灣養豬科學研究所	國立中興大學獸醫病理生物學研究所 助理教授
6	理事	朱旆億	男	國立臺灣大學醫學系 國立臺灣大學獸醫專業學院博士	輔仁大學醫學系兼任助理教授	彰化秀傳紀念醫院病理科主任
7	理事	李進成	男	英國倫敦大學神經病理博士	長庚醫院內科醫師	新光吳火獅紀念醫院病理檢驗科醫師
8	理事	阮正雄	男	日本國立岡山大學 大學院 醫齒藥總合研究科 博士	台北醫學大學副教授兼細胞學中心主任	輔英科技大學附設醫院
9	理事	林永和	男	國立台大病理研究所碩士	台北醫學院病理科講師	台北醫學院病理科副教授
10	理事	祝志平	男	台大病理研究所	台北醫學院講師	彰化秀傳紀念醫院病理部

11	理事	賴銘淙	男	清華大學生命科學院博士	彰濱秀傳紀念醫院病理科主任	衛生福利部臺中醫院病理學科主任
12	理事	賈敏原	男	國立臺灣大學獸醫專業學院 博士	國衛院研究員	國立中興大學獸醫系
						助理教授
13	理事	張俊梁	男		國防醫學院醫學科學研究所博士	國防醫學院兼任助理教授
14	理事	陳姿妤	女	國立中興大學獸醫病理學研究所碩士	生技中心研究員	國家實驗動物中心病理獸醫師
15	理事	鄭明芳	男	國立陽明大學口腔生物研究所博士	國防醫學院醫學系病理學科暨病理及寄生蟲研究所	805 醫院病理主任
16	常務監事	廖俊旺	男	國立台灣大學獸醫學研究所博士	農業藥物毒物試驗所應用毒理組副研究員	國立中興大學獸醫病理生物學研究所教授
17	監事	蔡慧玲	女	台灣女科技人學會		監事
18	監事	楊俊宏	男	長庚大學生物醫學研究所博士		農委會農業藥物毒物試驗所
19	監事	簡耀君	男	國立臺灣大學獸醫學研究所獸醫學碩士	長青動物醫院病理部主任	長青動物醫院病理部主任
20	監事	彭奕仁	男	國防醫學院醫學科學研究所博士班學生		三軍總醫院病理部主治醫師
21	秘書長	張惠雯	女	國立臺灣大學獸醫專業學院 博士		台灣大學分子暨比較病理生物學研究所 助理教授

中華民國比較病理學會會計報表
106.09.02-106.11.30

科　目	預算金額	本月實收金額	本月實付金額	實收付累計金額
本會經費收入	**72,080**			
入會費	6,000			
常年會費	22,000			
贊助會費	40,000			
利息收入	80			
其它收入	4,000			
本會經費支出	**72,080**			
人事費	**10,200**			
兼職人員車馬費	4,200			
其它人事費	6,000			
辦公費	**21,380**			
印刷費	20,080			
旅運費	300			
郵電費	1,000		203	
公共關係費	0			
業務費	**25,800**			
會議費	25,800		285	
雜費	**14,000**			
提撥基金	**700**			
獸醫再教育登錄			1,500	
收入合計		0		
支出合計				
上期結餘　(零用金+活存)	129,506			
本月結餘　(合作金庫活存)	60,847			
本月結餘　(零用金)	66,671			
本月結餘　(零用金)	127,518			

理事長　　**秘書長**　　**會計**　　**製表**

中華民國比較病理學會
收支決算表
中華民國 105 年 1 月 1 日至 105 年 12 月 31 日

單位：新臺幣(元)

科目				決算數	預算數	決算與預算比較數		說明
款	項	目	名稱			增加	減少	
1			本會經費收入	**62,149**	**72,080**		**9,931**	
	1		入會費	7,500	6,000	1,500		新增一般會員 5 人(1 位學生轉一般)，學生 17 人
	2		常年會費	45,100	22,000	23,100		
	3		贊助會費	3,050	40,000		36,950	友聯贊助 68th 餐費
	4		利息收入	99	80	19		104.12$43+105.06$33+105.12$23
	5		其他收入	6,400	4,000	2,400		研討會費用 3,100，書籍 1,800 及其它 1,500
2			本會經費支出	**39,062**	**72,080**		**33,018**	
	1		人事費	**4,000**	**10,200**		**6,200**	
		1	兼職人員車馬費	4,000	4,200		200	
		2	其它人事費	0	6,000		6,000	專題演講者車馬費(歐緒嘉.黃馨頤)
	2		辦公費	**12,642**	**21,380**		**8,738**	
		1	印刷費	10,542	20,080		9,538	印刷第 66-68 次會議手冊
		2	旅運費	0	300		300	
		3	郵電費	2,100	1,000	1,100		
		4	公共關係費	0	0			
	3		業務費	**22,420**	**25,800**		**3,380**	
		1	會議費	22,420	25,800		3,380	66-68 次會議費(含餐費及點心費)
	4		雜費支出	**0**	**14,000**		**14,000**	
	5		提撥基金	**0**	700		**700**	
3			本期餘絀	**23,087**	**0**			

理事長：廖俊旺　常務監事：鄭謙仁　秘書長：朱辨德　會計：許靜宜

中華民國比較病理學會

現金出納表

中華民國 105 年 1 月 1 日至 105 年 12 月 31 日

單位：新臺幣(元)

收　　入		支　　出	
科目名稱	金　　額	科目名稱	金　　額
上期結存	63,453	本期支出	39,062
本期收入	62,149	本期結存	86,540
合　　計	125,602	合　　計	125,602

理事長: 廖俊旺　　常務監事: 鄭謙仁　　祕書長: 朱旆億　　會計: 許靜宜

中華民國比較病理學會

資　產　負　債　表

中華民國 105 年 1 月 1 日至 105 年 12 月 31 日　　單位：新臺幣(元)

資產			負債、基金暨餘絀		
科目	金額		科目	金額	
流動資產	86,540		流動負債	0	
庫存現金	30,693		基金	0	
銀行存款	55,847		提撥基金	0	
銀行存款－基金	0		本期餘絀	23,087	
			累計餘絀	63,453	
合計	86,540		合計	86,540	

理事長：　　常務監事：　　秘書長：　　會計：

中華民國比較病理學會

基金收支表

中華民國 105 年 1 月 1 日至 105 年 12 月 31 日止

單位：新臺幣(元)

收入		支出	
科目名稱	金額	科目名稱	金額
準備基金		準備基金	
歷年累存	0	支付退職金	0
本年度利息收入	0	支付退休金	0
本年度提撥	0		0
	0		
		結餘	0

理事長：廖俊旺　常務監事：鄭謙仁　祕書長：朱沛德　會計：許靜宜

說明：本會暫無基金專戶。於年底時依盈餘情形提列為不可動支的準備基金，於活期存簿中(合作金庫)。目前歷年累存之準備基金為壹萬肆仟元。

中華民國比較病理學會

106 年度工作計劃

一、會務

1. 徵求會員

持續進行學會推廣及會員召募，擴大會員陣容

2. 整理會籍與清查會費

i. 更新整理會籍資料，並製作會員通訊錄

ii. 清查會員繳費狀況，進行催繳，缺繳三年以上進行停權

3. 召開會議

召開會員大會一次

召開理監事會議，每三個月一次

4. 學術活動

持續辦理三次研討會，並邀請國內外專家學者進行學術性演講

二、業務

1. 繳納會費

2. 文書處理(整理與更新會員信箱，刪除無效信箱)

3. 病例資料處理(掃描研討會議病例切片，供會員研究教學使用)

4. 研討會活動照片、會員狀態及網頁維護更新

中華民國比較病理學會
收支預算表
中華民國 106 年 1 月 1 日至 106 年 12 月 31 日

單位：新臺幣(元)

科目				預算數	上年度預算數	本年度與上年度預算比較數		說明
款	項	目	名稱			增加	減少	
1			本會經費收入	**58,500**	**72,080**		**13,580**	
	1		入會費	4,000	6,000		2,000	
	2		常年會費	30,000	22,000	8,000		
	3		贊助會費	20,000	40,000		20,000	
	4		利息收入	80	80			
	5		其他收入	4,420	4,000	420		
2			本會經費支出	**58,500**	**72,080**		**13,580**	
	1		人事費	**8,000**	**10,200**		**2,200**	
		1	兼職人員車馬費	8,000	4,200	3,800		講師費 2000 元 x4 人
		2	其他人事費	0	6,000		6,000	
	2		辦公費	**14,000**	**21,380**		**7,380**	
		1	印刷費	12,000	20,080		8,080	會議手冊印製
		2	旅運費	0	300		300	
		3	郵電費	2,000	1,000	1,000		郵寄
		4	公共關係費	0	0			
	3		業務費	**25,800**	**25,800**			
		1	會議費	25,800	25,800			會議費(含餐費及點心費)
	4		雜費支出	**10,000**	**14,000**		**4,000**	
	5		提撥基金	**700**	**700**			依收入總額提列 20%以下作為準備基金
3			本期餘絀	**0**	**0**			

理事長：廖俊旺　常務監事：鄭謙仁　秘書長：朱靜德　會計：許靜宜

數位組織切片資料庫

How-To Access Comparative Pathology Virtual Slides
Hosted at the Web Library in NTU Vet Med Digital Pathology Lab
(中華民國比較病理學會數位式組織切片影像資料庫)

Comparative Pathology glass slides are now digitalized and accessible to all participants through the internet and a web browser (see below for detail instruction).

1. Please make sure that your web browser (e.g. Internet Explorer, Firefox or Safari) is equipped with "flash player." If not, it can be added from http://www.adobe.com/products/flashplayer/ for free.

2. Please go to the Chinese Society of Comparative Pathology web site at http://www.ivp.nchu.edu.tw/cscp/

3.Choose the slide images (e.g. 63rd CSCP)

4. Pick any case you'd like to read (e.g. case 435-440)

比較病理研討會病例分類一覽表

中華民國比較病理學會
第一次至第七十次比較病理學研討會病例分類一覽表

分類	病例編號	會議場次	診　　斷	動物別	提　供　單　位
腫瘤	1.	1	Myxoma	Dog	美國紐約動物醫學中心
	2.	1	Chordoma	Ferret	美國紐約動物醫學中心
	3.	1	Ependymoblastoma	Human	長庚紀念醫院
	8.	2	Synovial sarcoma	Pigeon	美國紐約動物醫學中心
	18.	3	Malignant lymphoma	Human	長庚紀念醫院
	19.	3	Malignant lymphoma	Wistar rat	國家實驗動物繁殖及研究中心
	24.	3	Metastatic thyroid carcinoma	Human	省立新竹醫院
	25.	3	Chordoma	Human	新光吳火獅紀念醫院
	34.	4	Interstitial cell tumor	Dog	中興大學獸醫學系
	35.	4	Carcinoid tumor	Human	長庚紀念醫院
	36.	4	Hepatic carcinoid	Siamese cat	美國紐約動物醫學中心
	38.	6	Pheochromocytoma	Ferret	美國紐約動物醫學中心
	39.	6	Extra adrenal pheochromocytoma	Human	新光吳火獅紀念醫院
	40.	6	Mammary gland fibroadenoma	Rat	國家實驗動物繁殖及研究中心
	41.	6	Fibroadenoma	Human	省立豐原醫院
	42.	6	Canine benign mixed type mammary gland tumor	Pointer bitch	中興大學獸醫學系
	43.	6	Phyllodes tumor	Human	台中榮民總醫院
	44.	6	Canine oral papilloma	Dog	台灣大學獸醫學系
	45.	6	Squamous cell papilloma	Human	中國醫藥學院
	47.	7	1. Lung: metastatic carcinoma associated with cryptococcal infection. 2. Liver: metastatic carcinoma. 3. Adrenal gland, right: carcinoma (primary)	Human	三軍總醫院
	56.	8	Gastrointestinal stromal tumor	Human	台中榮民總醫院
	59.	8	Colonic adenocarcinoma	Dog	美國紐約動物醫學中心
	62.	8	Submucosal leiomyoma of stomach	Human	頭份為恭紀念醫院
	64.	8	1. Adenocarcinoma of sigmoid colon 2. Old schistosomiasis of rectum	Human	省立新竹醫院
	71.	9	Myelolipoma	Human	台北耕莘醫院
腫	72.	9	Reticulum cell sarcoma	Mouse	國家實驗動物繁殖及研究中心

瘤	73.	9	Hepatocellular carcinoma	Human	新光吳火獅紀念醫院
	74.	9	Hepatocellular carcinoma induced by aflatoxin B1	Wistar rats	台灣省農業藥物毒物試驗所
		10	Angiomyolipoma	Human	羅東博愛醫院
		10	Inverted papilloma of prostatic urethra	Human	省立新竹醫院
		10	Nephrogenic adenoma	Human	國泰醫院
		10	Multiple myeloma with systemic amyloidosis	Human	佛教慈濟綜合醫院
		10	Squamous cell carcinoma of renal pelvis and calyces with extension to the ureter	Human	台北病理中心
		10	Fibroepithelial polyp of the ureter	Human	台北耕莘醫院
	90.	10	Clear cell sarcoma of kidney	Human	台北醫學院
	93.	11	Mammary gland adenocarcinoma, complex type , with chondromucinous differentiation	Dog	台灣大學獸醫學系
	94.	11	1. Breast, left, modified radical mastectomy, showing papillary carcinoma, invasive 2. Nipple, left, modified radical mastectomy, papillary carcinoma, invasive 3. Lymph node, axillary, left, lymphadenectomy, palillary carcinoma, metaststic	Human	羅東聖母醫院
	95.	11	Transmissible venereal tumor	Dog	中興大學獸醫學系
	96.	11	Malignant lymphoma, large cell type, diffuse, B-cell phenotype	Human	彰化基督教醫院
	97.	11	Carcinosarcomas	Tiger	台灣養豬科學研究所
	98.	11	Mucinous carcinoma with intraductal carcinoma	Human	省立豐原醫院
	99.	11	Mammary gland adenocarcinoma, type B, with pulmonary metastasis, BALB/cBYJ mouse	Mouse	國家實驗動物繁殖及研究中心
	100.	11	Malignant fibrous histiocytoma and paraffinoma	Human	中國醫藥學院
	102.	11	Pleomorphic adenoma (benign mixed tumor)	Human	佛教慈濟綜合醫院
腫瘤	103.	13	Atypical central neurocytoma	Human	新光吳火獅紀念醫院
		13	Cardiac schwannoma	SD rat	國家實驗動物繁殖及研究中心
		13	Desmoplastic infantile ganglioglioma	Human	高雄醫學院
		13	1.Primary cerebral malignant lymphoma 2.Acquired immune deficiency syndrome	Human	台北市立仁愛醫院

		13	Schwannoma	Human	三軍總醫院
		13	Osteosarcoma	Dog	美國紐約 動物醫學中心
		14	Mixed germ-cell stromal tumor, mixed sertoli cell and seminoma-like cell tumor	Dog	美國紐約 動物醫學中心
		14	Krukenberg's Tumor	Human	台北病理中心
		14	Primary insular carcinoid tumor arising from cystic teratoma of ovary.	Human	花蓮慈濟綜合醫院
		14	Polypoid adenomyoma	Human	大甲李綜合醫院
		14	Gonadal stromal tumor	Human	耕莘醫院
		14	Gestational choriocarcinoma	Human	彰化基督教醫院
		14	Ovarian granulosa cell tumor	Horse	中興大學獸醫學系
		15	Kaposi's sarcoma	Human	華濟醫院
		15	Basal cell carcinoma (BCC)	Human	羅東聖母醫院
		15	Transmissible venereal tumor	Dog	臺灣大學獸醫學系
		17	Canine Glioblastoma Multiforme in Cerebellopontine Angle	Dog	中興大學獸醫病理研究所
	143	18	Osteosarcoma associated with metallic implants	Dog	紐約動物醫學中心
	144	18	Radiation-induced osteogenic sarcoma	Human	花蓮慈濟綜合醫院
	145	18	Osteosarcoma, osteogenic	Dog	臺灣大學獸醫學系
	146	18	Pleomorphic rhabdomyosarcoma	Human	行政院衛生署新竹醫院
	147	18	Papillary Mesothelioma of pericardium	Leopard	屏東科大學獸醫學系
	148	18	Cystic ameloblastoma	Human	台北醫學院
	149	18	Giant cell tumor of bone	Canine	中興大學獸醫學院
	150	18	Desmoplastic small round cell tumor (DSRCT)	Human	華濟醫院
	152	18	Hepatocellular carcinoma	Human	羅東聖母醫院
	158	20	Hemangiopericytoma	Human	羅東聖母醫院
	160	20	Cardiac fibroma	Human	高雄醫學大學病理學科
	166	21	Nephroblastoma	Rabbit	紐約動物醫學中心
	168	21	Nephroblastoma	Pig	台灣動物科技研究所
腫瘤	169	21	Nephroblastoma with rhabdomyoblastic differentiation	Human	高雄醫學大學病理科
	172	21	Spindle cell sarcoma	Human	羅東聖母醫院
	174	21	Juxtaglomerular cell tumor	Human	新光醫院病理檢驗科
	190	27	Angiosarcoma	Human	高雄醫學大學病理學科
	192	27	Cardiac myxoma	Human	彰化基督教醫院病理科
	194	27	Kasabach-Merrit syndrome	Human	慈濟醫院病理科
	195	27	Metastatic hepatocellular carcinoma, right atrium	Human	新光醫院病理科
	197	27	Papillary fibroelastoma of aortic	Human	新光醫院病理科

			valve		
	198	27	Extraplacental chorioangioma	Human	耕莘醫院病理科
	208	30	Granulocytic sarcoma (Chloroma) of uterine cervix	Human	高雄醫學大學病理學科
	210	30	Primary non-Hodgkin's lymphoma of bone, diffuse large B cell, right humerus	Human	彰化基督教醫院病理科
	213	30	Lymphoma, multi-centric type	Dog	中興大學獸醫系
	214	30	CD30 (Ki-1)-postitive anaplastic large cell lymphoma (ALCL)	Human	新光醫院病理科
	215	30	Lymphoma, mixed type	Koala	台灣大學獸醫學系
	217	30	Mucosal associated lymphoid tissue (MALT) lymphoma, small intestine	Cat	臺灣大學獸醫學研究所
		31	Nasal type NK/T cell lymphoma	Human	高雄醫學大學病理科
		31	Acquired immunodeficiency syndrome (AIDS)with disseminated Kaposi's sarcoma	Human	慈濟醫院病理科
		32	Epithelioid sarcoma	Human	彰化基督教醫院病理科
		32	Cutaneous B cell lymphoma, eyelid , bilateral	Human	羅東聖母醫院病理科
		32	Extramammary Paget's disease (EMPD) of the scrotum	Human	萬芳北醫皮膚科病理科
		32	Skin, back, excision, CD30+diffuse large B cell lymphoma, Soft tissue, leg , side not stated, excision, vascular leiomyoma	Human	高雄醫學大學附設醫院病理科
		34	Malignant melanoma, metastasis to intra-abdominal cavity	Human	財團法人天主教耕莘醫院病理科
腫瘤		34	Vaccine-associated rhabdomyosarcoma	Cat	台灣大學獸醫學系
		34	1. Pleura: fibrous plaque 2. Lung: adenocarcinoma 3. Brain: metastatic adenocarcinoma	Human	高雄醫學大學附設 中和醫院病理科
		34	1. Neurofibromatosis, type I 2. Malignant peripheral nerve sheath tumor (MPNST)	Human	花蓮慈濟醫院病理科
		35	Glioblastoma multiforme	Human	羅東聖母醫院
		35	Pineoblastoma	Wistar rat	綠色四季
		35	Chordoid meningioma	Human	高醫病理科
		35	Infiltrating lobular carcinoma of left breast with meningeal carcinomatosis and brain metastasis	Human	花蓮慈濟醫院病理科
		35	Microcystic Meningioma.	Human	耕莘醫院病理科
		36	Well-differentiated fetal adenocarcinoma without lymph node metastasis	Human	新光吳火獅紀念醫院

腫瘤		36	Adenocarcinoma of lung.	Human	羅東聖母醫院
		36	Renal cell carcinoma	Canine	國立台灣大學獸醫學系獸醫學研究所
		36	Clear cell variant of squamous cell carcinoma, lung	Human	高雄醫學大學附設中和醫院病理科
		37	Metastatic adrenal cortical carcinoma	Human	耕莘醫院病理科
		37	Hashimoto's thyroiditis with diffuse large B cell lymphoma and papillary carcinoma	Human	高雄醫學大學附設中和醫院病理科
		38	Medullar thyroid carcinoma	Canine	臺灣大學獸醫學系
		39	Merkel cell carcinoma	Human	羅東博愛醫院
		39	Cholangiocarcinoma	Human	耕莘醫院病理科
		39	Sarcomatoid carcinoma of renal pelvis	Human	花蓮慈濟醫院病理科
		39	Mammary Carcinoma	Canine	中興大學獸醫學系
		39	Metastatic prostatic adenocarcinoma	Human	耕莘醫院病理科
		39	Malignant canine peripheral nerve sheath tumors	Canine	臺灣大學獸醫學系
		39	Sarcomatoid carcinoma, lung	Human	羅東聖母醫院
		40	Vertebra,T12,laminectomy, metastatic adenoid cystic carcinoma	Human	彰化基督教醫院
		40	rhabdomyosarcoma	Canine	臺灣大學獸醫學系
		40	Fetal rhabdomyosarcoma	SD Rat	中興大學獸醫學系
		40	Adenocarcinoma, metastatic, iris, eye	Human	高雄醫學大學
		40	Axillary lymph node metastasis from an occult breast cancer	Human	羅東博愛醫院
		40	Hepatocellular carcinoma	Human	國軍桃園總醫院
		40	Feline diffuse iris melanoma	Faline	中興大學獸醫學系
		40	Metastatic malignant melanoma in the brain and inguinal lymph node	Human	花蓮慈濟醫院病理科
		41	Tonsil Angiosarcoma	Human	羅東博愛醫院
		41	Malignant mixed mullerian tumor	Human	耕莘醫院病理科
		41	Renal cell tumor	Rat	中興大學獸醫學系
		41	Multiple Myeloma	Human	花蓮慈濟醫院病理科
		41	Myopericytoma	Human	新光吳火獅紀念醫院
		41	Extramedullary plasmacytoma with amyloidosis	Canine	臺灣大學獸醫學系
		42	Metastatic follicular carcinoma	Human	羅東聖母醫院病理科
		42	Primitive neuroectodermal tumor (PNET), T-spine.	Human	羅東博愛醫院病理科
		42	Hemangioendothelioma of bone	Human	花蓮慈濟醫院病理科
		42	Malignant tumor with perivascular epithelioid differentiation, favored malignant PEComa	Human	彰化基督教醫院
		43	Mucin-producing	Human	基隆長庚醫院

			cholangiocarcinoma		
		43	Cutaneous epitheliotropic lymphoma	Canine	臺灣大學獸醫專業學院
		43	Cholangiocarcinoma	Felis Lynx	臺灣大學獸醫專業學院
		43	Lymphoma	Canine	臺灣大學獸醫專業學院
		43	Solitary fibrous tumor	Human	彰化基督教醫院
		43	Multiple sarcoma	Canine	臺灣大學獸醫專業學院
		44	Malignant solitary fibrous tumor of pleura	Human	佛教慈濟綜合醫院暨慈濟大學
		44	Ectopic thymic carcinoma	Human	彰濱秀傳紀念醫院病理科
		44	Medullary carcinoma of the right lobe of thyroid	Human	彰化基督教醫院病理科
		44	Thyroid carcinosarcoma with cartilage and osteoid formation	Canine	臺灣大學獸醫專業學院
		44	Lymphocytic leukemia/lymphoma	Koala	臺灣大學獸醫專業學院
		45	Neuroendocrine carcinoma of liver	Human	佛教慈濟綜合醫院暨慈濟大學
		45	Parachordoma	Human	羅東博愛醫院病理科
腫瘤		45	Carcinoma expleomorphic adenoma, submandibular gland	Human	天主教耕莘醫院病理科
		45	Melanoma, tongue	Canine	國立臺灣大學獸醫專業學院
		45	Renal cell carcinoma, papillary type	Canine	國立臺灣大學 獸醫專業學院
	323	46	Metastatic papillary serous cystadenocarcinoma, abdomen	Human	國軍桃園總醫院
	324	46	Malignant gastrointestinal stromal tumor	Human	天主教耕莘醫院
	329	47	Sclerosing stromal tumor	Human	彰化基督教醫院
	330	47	Pheochromocytoma	Human	天主教耕莘醫院
	334	48	Metastatic infiltrating ductal carcinoma, liver	Human	佛教慈濟綜合醫院
	335	48	Adenoid cystic carcinoma, grade II, Rt breast	Human	天主教耕莘醫院
	336	48	Malignant lymphoma, diffuse, large B-cell, right neck	Human	林新醫院
	337	48	Pulmonary carcinoma, multicentric	Dog	國立臺灣大學 獸醫專業學院
	338	48	Malignant melanoma, multiple organs metastasis	Rabbit	國立中興大學獸醫學院
	340	49	Mucinous-producing urothelial-type adenocarcinoma of prostate	Human	天主教耕莘醫院
	342	49	Plexiform fibromyxoma	Human	彰化基督教醫院
	343	49	Malignant epithelioid trophoblastic tumor	Human	佛教慈濟綜合醫院

腫瘤	344	49	Epithelioid sarcoma	Human	林新醫院
	346	49	Transmissible venereal tumor	Dog	國立臺灣大學獸醫專業學院
	347	50	Ewing's sarcoma (PNET/ES tumor)	Human	天主教耕莘醫院病理科
	348	50	Malignant peripheral nerve sheath tumor, epithelioid type	Human	林新醫院病理科
	349	50	Low grade fibromyxoid sarcoma	Human	高雄醫學大學附設中和紀念醫院病理科
	351	50	Orbital embryonal rhabdomyosarcoma	Dog	Gifu University, Japan (岐阜大学)
	354	50	Granular cell tumor	Dog	國立臺灣大學獸醫專業學院
	356	50	Malignant neoplasm of unknown origin, cerebrum	Dog	國立臺灣大學獸醫專業學院
	357	51	Small cell Carcinoma, Urinary bladder	Human	天主教耕莘醫院
	364	51	Perivascular epithelioid cell tumor, in favor of lymphangiomyomatosi	Human	高雄醫學大學附設中和紀念醫院病理科
	365	52	Angiosarcoma, skin (mastectomy)	Human	天主教耕莘醫院病理科
	366	52	Rhabdomyoma (Purkinjeoma), heart	Swine	屏東縣家畜疾病防治所
	368	52	Langerhans cell sarcoma, lung	Human	高雄醫學大學附設中和紀念醫院病理科
	369	52	Biliary cystadenocarcinoma, liver	Camel	國立屏東科技大學獸醫教學醫院病理科
	371	52	Malignant melanoma, nasal cavity	Human	羅東博愛醫院病理科
	373	53	Malignant giant cell tumor of tendon sheath	Human	天主教耕莘醫院病理科
	376	53	Malignant mesothelioma of tunica vaginalis	Golden hamster	中興大學獸醫病理生物學研究所
	377	53	Perivascular Epithelioid Cell Tumor (PEComa) of the uterus	Human	彰化基督教醫院病理部
	378	53	Medullary carcinoma	Human	高雄醫學大學病理部
	389	55	Mantle cell lymphoma involving ascending colon, cecum, ileum, appendix and regional lymph nodes with hemorrhagic necrosis in the colon and leukemic change.	Human	奇美醫院病理部
	390	55	Pulmonary Squamous Cells Carcinoma of a Canine	Dog	國立屏東科技大學獸醫教學醫院病理科
	391	55	Squamous cell carcinoma, lymphoepithelioma-like type	Human	高醫附設醫院病理科
	393	55	Malignant peripheral nerve sheath tumor (MPNST), subcutis, canine.	Dog	中興大學獸醫學系
	394	55	Desmoplastic malignant melanoma (mimic malignant peripheral nerve sheath tumor)	Human	中山醫學大學醫學系病理學科暨附設醫院病理科

腫瘤	397	56	Atypical meningioma	Human	奇美醫院病理科
	401	57	Lymph nodes, excision - Hodgkin's lymphoma, mixed cellularity	Human	天主教耕莘醫院
	402	57	1. Leukemia, nonlymphoid, granulocytic, involving bone marrow, spleen, liver, heart, lungs, lymph nodes, kidney, hardian gland, duodenum and pancreas. 2. Pinworm infestation, moderate, large intestines. 3. Fibrosis, focal, myocardium.	Mouse	國家實驗動物中心
	403	57	Non-secretory multiple myeloma with systemic amyloidosis	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	404	57	1. Hepatocellular adenocarcinoma, multifocal, severe, liver 2. Hemorrhage, moderate, acute, body cavity 3. Bumble foot, focal, mild, chronic, food pad 4. cyst and atherosclerosis, chronic, testis	Goose	國立中興大學獸醫病理生物學研究所
	406	57	Castleman's disease	Human	羅東博愛醫院
	407	58	Hepatoid adenocarcinoma of colon with multiple liver metastases	Human	羅東博愛醫院
	408	58	Cardiac and pulmonary melanoma	Pig	國立中興大學獸醫病理生物學研究所
	409	58	Double Tumors: (1) small cell carcinoma of lung (2) Hodgkin's lymphoma, mixed cellularity type. Acrokeratosis paraneoplastica	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	410	58	Von Hippel–Lindau disease	Human	奇美醫院病理部
	411	58	Multiple neoplasia	Tiger	國立屏東科技大學獸醫教學醫院病理科
	412	58	Hepatocellular carcinoma and multiple myeloma	Human	中山醫學大學醫學系病理學科暨附設醫院病理科
	413	59	DEN plus AAF carcinogens induced hepatic tumor in male rats	Rat	中興大學獸醫病理生物學研究所
	417	59	Alveolar soft part sarcoma	Human	高雄醫學大學附設中和紀念醫院病理科
	418	60	Seminoma associated with supernumerary testicles	Human	羅東博愛醫院
	422	61	Retinoblastoma in a baby girl	Human	彰化基督教醫院
	423	61	Colloid goiter in a female Radiated tortoise (*Astrochelys radiata*)	Tortoise	台灣大學獸醫專業學院分子暨比較病理生物學研究所

腫瘤	424	61	Lymphoepithelial carcinoma in a women	Human	羅東博愛醫院
	425	61	Histiocytic sarcoma in a SJL/J mouse	mouse	國家實驗動物中心
	428	62	Maligant lymphoma, diffuse large B-cell (DLBCL) in a women	Human	國軍桃園總醫院病理檢驗部
	429	62	Immune reconstitution inflammatory syndrome (IRIS)-associated Kaposi's sarcoma in a man	Human	花蓮慈濟醫院
	430	62	Mammary adenocarcinoma, tubular form in a female feline	Cat	中興大學獸醫病理生物學研究所
	433	62	Rhabdomyosarcoma, retroperitoneal cavity in a female mouse	Mouse	國家實驗動物中心
	434	62	Malignant pheochromocytoma with pleural metastasis in a man	Human	天主教聖馬爾定醫院病理科
	436	63	Primary non-Hodgkins lymphoma of terminal ileum	Human	國軍桃園總醫院病理檢驗部
	438	63	Ectopic thyroid gland tumor	Beagle	台灣大學獸醫專業學院分子暨比較病理生物學研究所
	440	63	Hepatocellular cell carcinoma Squamous cell carcinoma	Human	天主教聖馬爾定醫院口腔顎面外科
	442	64	Large B cell lymphoma in a man	Human	羅東博愛醫院
	444	64	Olfactory neuroblastoma in a female cat	Cat	台灣大學獸醫專業學院分子暨比較病理生物學研究所
	445	64	Oligodendroglioma in a man	Human	國軍桃園總醫院病理檢驗部
	447	64	Ameloblastoma of mandible in a man	Human	天主教聖馬爾定醫院口腔顎面外科
	448	65	EBV associated extranodal NK / T-cell lymphoma, nasal type	Human	羅東博愛醫院
	451	65	Mouse, subcutaneously mass – exocrine pancreatic adenocarcinoma, AsPC-1 cells, human origin, heterotopical model	Mouse	國家實驗動物中心
	452	65	1. Extranodal NK/T-cell lymphoma, nasal type 2. 2. Regional lymph nodes and omentum are involved.	Human	台中醫院
	457	66	Metastatic squamous cell carcinoma (SCC)	Horse	台灣大學獸醫專業學院分子暨比較病理生物學研究所
	459	66	Squamous intraepithelial lesion (SIL)	Human	高雄醫學大學附設醫院病理部
	460	66	Subcutaneous liposarcoma and uterine endometrial stromal sarcoma	African hedgehog	中興大學獸醫病理生物學研究所

463	67	Splenic undifferentiated pleomorphic sarcoma in a Djungarian hamster	Hamster	國立中興大學獸醫教學醫院鳥禽與野生動物科
465	67	Plasmacytoid urothelial carcinoma	Dog	國立台灣大學獸醫專業學院分子暨比較病理生物學研究所
467	67	1.Poorly differentiated hemangiosarcoma in face 2.Squamous cell carcinoma in ear	Civet	農委會特有生物研究保育中心
473	68	Simple mammary gland adenocarcinoma	Guinea pig	中興大學獸醫病理生物學研究所
476	69	Mediastinum dedifferentiated liposarcoma	Human	羅東博愛醫院
477	69	Uterus adenosarcoma	Hedgehog	中興大學獸醫病理生物學研究所
478	69	Primary pericardial mesothelioma in a woman	Human	佛教慈濟綜合醫院暨慈濟大學病理科
479	69	Pulmonary solid adenocarcinoma	Dog	國立台灣大學獸醫專業學院分子暨比較病理生物學研究所
481	70	Paraganglioma of liver	Human	佛教慈濟綜合醫院暨慈濟大學病理科
482	70	Adenocarcinoma, transmural, recurrent, with desmoplasia and metastasis to regional lymph node, jejunum and ileocecal junction Mast cell tumor, moderately-differentiated, multiple, jejunal and ileocecal masses	Cat	國立台灣大學獸醫專業學院分子暨比較病理生物學研究所
483	70	Solitary fibrous tumor of pelvis	Human	羅東博愛醫院病理科
484	70	Chronic lymphocytic leukemia, with systemic dissemination, bone marrow, intestine, generalized lymph node, spleen, liver, kidney and lung	Dog	國立台灣大學獸醫專業學院分子暨比較病理生物學研究所
485	70	Intestine, large, colon, ascending, --- Carcinoma, poorly differentiated (pT4aN1b). (ADVANCED) 2. Stomach, distal, --- Adenocarcinoma, moderately differentiated (pT1bNO) (EARLY) (Synchronous cancer)	Human	秀傳醫療社團法人秀傳紀念醫院
487	70	Angiomyolipoma of the liver	Human	衛生福利部臺中醫院病理科

細菌		1	Tuberculosis	Monkey	臺灣大學獸醫學系
	7.	1	Tuberculosis	Human	省立新竹醫院
	12.	2	H. pylori-induced gastritis	Human	台北病理中心
	13.	2	Pseudomembranous colitis	Human	省立新竹醫院
	26.	3	Swine salmonellosis	Pig	中興大學獸醫學系
	27.	3	Vegetative valvular endocarditis	Pig	台灣養豬科學研究所
	28.	4	Nocardiosis	Human	台灣省立新竹醫院
	29.	4	Nocardiosis	Largemouth bass	屏東縣家畜疾病防治所
	32.	4	Actinomycosis	Human	台灣省立豐原醫院
	33.	4	Tuberculosis	Human	苗栗頭份為恭紀念醫院
	53.	7	Intracavitary aspergilloma and cavitary tuberculosis, lung.	Human	羅東聖母醫院
	54.	7	Fibrocalcified pulmonary TB, left Apex. Mixed actinomycosis and aspergillosis lung infection with abscess DM, NIDDM.	Human	林口長庚紀念醫院
	58.	7	Tuberculous enteritis with perforation	Human	佛教慈濟綜合醫院
	61.	8	Spirochetosis	Goose	國立嘉義農專獸醫科
	63.	8	Proliferative enteritis (*Lawsonia intracellularis* infection)	Porcine	屏東縣家畜疾病防治所
	68.	9	Liver abscess (Klebsillae pneumoniae)	Human	台北醫學院
		10	Xanthogranulomatous inflammation with nephrolithiasis, kidney, right. Ureteral stone, right.	Human	羅東聖母醫院
		10	Emphysematous pyelonephritis	Human	彰化基督教醫院
	89.	10	Severe visceral gout due to kidney damaged Infectious serositis	Goose	中興大學獸醫學系
		13	Listeric encephalitis	Lamb	屏東縣家畜疾病防治所
		13	Tuberculous meningitis	Human	羅東聖母醫院
		16	Swine salmonellosis with meningitis	Swine	中興大學獸醫學系
		16	Meningoencephalitis, fibrinopurulent and lymphocytic, diffuse, subacute, moderate, cerebrum, cerebellum and brain stem, caused by Streptococcus spp. infection	Swine	國家實驗動物繁殖及研究中心
		17	Coliform septicemia of newborn calf	Calf	屏東縣家畜疾病防治所
		20	Porcine polyserositis and arthritis（Glasser's disease）	Pig	中興大學獸醫學院

細菌		20	Mycotic aneurysm of jejunal artery secondary to infective endocarditis	Human	慈濟醫院病理科
		21	Chronic nephritis caused by Leptospira spp	Pig	中興大學獸醫學院
		21	Ureteropyelitis and cystitis	Pig	中國化學製藥公司
		36	Pulmonary actinomycosis.	Human	耕莘醫院病理科
		37	Tuberculous peritonitis	Human	彰化基督教醫院病理科
		38	Septicemic salmonellosis	Piglet	屏東科技大學獸醫系
		38	Leptospirosis	Human	慈濟醫院病理科
		39	Mycobacteriosis	Soft turtle	屏東科技大學獸醫系
		42	*Staphylococcus* spp. infection	Formosa Macaque	中興大學獸醫病理學研究所
		42	Leptospirosis	Dog	台灣大學獸醫學系
		43	Leptospirosis	Human	花蓮慈濟醫院
		43	Cryptococcus and Tuberculosis	Human	彰濱秀傳紀念醫院
	319	46	Placentitis, Coxiella burnetii	Goat	台灣動物科技研究所
	321	46	Pneumonia, Buirkholderia pseudomallei	Goat	屏東縣家畜疾病防治所
	339	48	Mycoplasmosis	Rat	國家實驗動物中心
	352	50	Chromobacterium violaceum Septicemia	Gibbon	Bogor Agricultural University, Indonesia
	353	50	Salmonellosis	Pig	國立中興大學獸醫學院
	367	52	Melioidosis (Burkholderia pseudomallei), lung	Human	花蓮慈濟醫院
	370	52	Suppurative bronchopneumonia (*Bordetellae trematum)* with *Trichosomoides crassicauda* infestation	Rat	國立中興大學獸醫學院
	374	53	Pulmonary coccidiodomycosis	Human	彰化基督教醫院
	375	53	Paratuberculosis in Macaca cyclopis	Macaca cyclopis	國立屏東科技大學獸醫學院
	379	53	Bovine Johne's disease (BJD) or paratuberculosis of cattle	Dairy cow	屏東縣家畜疾病防治所
	380	53	NTB, Mycobacterium abscessus	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	382	54	Leptospirosis	Pig	國立屏東科技大學獸醫學院
	384	54	Neisseria Infected Pneumonitis	Cat	中興大學獸醫學系
	385	54	Mycobacteria avian complex dacryocyctitis	Human	花蓮佛教慈濟綜合醫院
	387	54	Swine Erysipelas	Pig	屏東縣家畜疾病防治所
	396	56	Suppurative meningitis caused by Streptococcus spp in pigs	Pig	國立中興大學獸醫病理生物學研究所
	399	56	Listeric encephalitis in dairy goats	Goat	屏東縣家畜疾病防治所

	435	63	Tuberculosis	Human	花蓮佛教慈濟綜合醫院
	438	63	Porcine proliferative enteritis (PPE)	Pig	國立中興大學獸醫病理生物學研究所
	446	64	Actinomycosis (lumpy jaw) in a dairy cattle	Cattle	國立中興大學獸醫病理生物學研究所
	450	65	*Mycobacterium avium* infection	Human	花蓮佛教慈濟綜合醫院
	464	67	Ulcerative actinomycotic squamous plaque with focal (basal) severe dysplasia, mucosa, gingivobuccal junction, right lower gingiva in a man	Human	嘉義聖馬爾定醫院
	469	68	Scrub typhus	Human	佛教慈濟綜合醫院暨慈濟大學
病毒	21.	3	Newcastle disease	Chicken	台灣大學獸醫學系
	22.	3	Herpesvirus infection	Goldfish	台灣大學獸醫學系
	30.	4	Demyelinating canine distemper encephalitis	Dog	台灣養豬科學研究所
	31.	4	Adenovirus infection	Malayan sun bears	台灣大學獸醫學系
	50.	7	Porcine cytomegalovirus infection	Piglet	台灣省家畜衛生試驗所
	55.	7	Infectious laryngo-tracheitis (Herpesvirus infection)	Broilers	國立屏東技術學院獸醫學系
	69.	9	Pseudorabies (Herpesvirus infection)	Pig	台灣養豬科學研究所
	78.	10	Marek's disease in native chicken	Chicken	屏東縣家畜疾病防治所
	92.	11	Foot- and- mouth disease (FMD)	Pig	屏東縣家畜疾病防治所
	101.	11	Swine pox	Pig	屏東科技大學獸醫學系
		13	Pseduorabies	Piglet	國立屏東科技大學
		13	Avian encephalomyelitis	Chicken	國立中興大學
		15	Contagious pustular dermatitis	Goat	屏東縣&台東縣家畜疾病防治所
		15	Fowl pox and Marek's disease	Chicken	中興大學獸醫學系
		16	Japanese encephalitis	Human	花蓮佛教慈濟綜合醫院
		17	Viral encephalitis, polymavirus infection	Lory	美國紐約動物醫學中心
		17	1. Aspergillus spp. encephalitis and myocarditis 2. Demyelinating canine distemper encephalitis	Dog	台灣大學獸醫學系
		19	Enterovirus 71 infection	Human	彰化基督教醫院
		19	Ebola virus infection	African Green monkey	行政院國家科學委員會實驗動物中心
		19	Rabies	Longhorn Steer	台灣大學獸醫學系
		20	Parvoviral myocarditis	Goose	屏東科技大學獸醫學系

		28	SARS	Human	台大醫院病理科
		28	TGE virus	swine	臺灣動物科技研究所
		28	Feline infectious peritonitis(FIP)	Feline	台灣大學獸醫學系
		30	Chicken Infectious Anemia (CIA)	Layer	屏東防治所
病毒	219	31	1. Lymph node:Lymphdenitis, with lymphocytic depletion and intrahistiocytic basophilic cytoplasmic inclusion bodies. Etiology consistent with Porcine Circovirus (PCV)infection. 2. Lung: Bronchointerstitial pneumonia, moderate, lymphoplasmacytic, subacute.	Pig	臺灣動物科技研究所
	220	31	Cytomegalovirus colitis	Human	彰化基督教醫院病理科
	221	31	Canine distemper virus Canine adenovirus type ll co-infection	Canine	國家實驗動物繁殖及研究中心
	223	32	1. Skin, mucocutaneous junction (lip): Cheilitis, subacute, diffuse, sever, with epidermal pustules, ballooning degeneration, proliferation, and eosinophilic intracytoplasmic inclusion bodies, Saanen goat. 2. Haired skin: Dermatitis, proliferative, lymphoplasmacytic, subacute, diffuse, sever, with marked epidermal pustules, ballooning degeneration, acanthosis, hyperkeratosis, and eosinophilic intracytoplasmic inclusion bodies.	Goat	台灣動物科技研究所
	238	35	Hydranencephaly	Cattle	國立屏東科技大學獸醫學系
	248	36	Porcine Cytomegalovirus (PCMV) infection	Swine	國立屏東科技大學獸醫學系
	250	36	Porcine respiratory disease complex (PRDC) and polyserositis, caused by co-infection with pseudorabies (PR) virus, porcine circovirus type 2 (PCV 2), porcine reproductive and respiratory syndrome (PRRS) virus and *Salmonella typhimurium*.	Swine	屏東縣家畜疾病防所
病毒	255	37	Vaccine-induced canine distemper	gray foxes	國立台灣大學獸醫學系
	265	39	Bronchointerstitial pneumonia (PCV II infection)	Swine	台灣大學獸醫學系
	295	42	Feline infectious peritonitis (FIP)	Cat	中興大學獸醫病理所

	362	51	Canine distemper virus infection combined pulmonary dirofilariasis	Dog	國家實驗研究院
	381	54	Polyomavirus infection of urinary tract	Human	羅東博愛醫院
	405	57	Porcine circovirus-associated lymphadenitis	Swine	國立屏東科技大學 獸醫教學醫院病理科
	414	59	Rabies virus infection	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	415	59	Canine distemper virus infection	Dog	台灣大學獸醫專業學院分子暨比較病理生物學研究所
	420	60	Respiratory syncytial virus infection	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	421	60	Porcine epidemic diarrhea (PED)	Piglet	國立中興大學獸醫病理生物學研究所
	455	66	Goose Haemorrhagic Polyomaviruses (GHPV)	Goose	農委會家畜衛生試驗所
	456	66	HPV associated small cell neuroendocrine carcinoma of uterine cervix	Human	羅東博愛醫院病理科
	458	66	Roventricular dilatation disease (PDD)	Cacatuini	國立中興大學獸醫病理生物學研究所
	468	68	Avian poxvirus	Eagle	國立中興大學獸醫病理生物學研究所
	472	68	Suspected viral infection with secondary aspergillosis	Parrot	國立中興大學獸醫病理生物學研究所
黴菌	23.	3	Chromomycosis	Human	台北病理中心
	47.	7	Lung: metastatic carcinoma associated with cryptococcal infection. Liver: metastatic carcinoma. Adrenal gland, right: carcinoma (primary)	Human	三軍總醫院
	48.	7	Adiaspiromycosis	Wild rodents	台灣大學獸醫學系
	52.	7	Aspergillosis	Goslings	屏東縣家畜疾病防治所
	53.	7	Intracavitary aspergilloma and cavitary tuberculosis, lung.	Human	羅東聖母醫院
	54.	7	Fibrocalcified pulmonary TB, left Apex. Mixed actinomycosis and aspergillosis lung infection with abscess DM, NIDDM.	Human	林口長庚紀念醫院
	105.	13	Mucormycosis Diabetes mellitus	Human	花蓮佛教慈濟綜合醫院
		15	Eumycotic mycetoma	Human	花蓮佛教慈濟綜合醫院
		17	1. Aspergillus spp. encephalitis and myocarditis	Dog	台灣大學獸醫學系

			2. Demyelinating canine distemper encephalitis		
黴菌		43	Systemic Candidiasis	Tortoise	中興大學獸醫學院
		45	Alfatoxicosis in dogs	Canine	國立臺灣大學 獸醫專業學院
	322	46	Allergic fungal sinusitis	Human	羅東博愛醫院
	326	46	Meningoencephalitis, Aspergillus flavus	Cat	國立臺灣大學 獸醫專業學院
	331	47	Histoplasmosis	Human	花蓮慈濟醫院病理科
	332	47	Pulmonary Blastomycosis	Rat	中興大學獸醫學院
	355	50	Encephalitozoonosis	Rabbit	國立中興大學獸醫學院
	356	50	Eosinophilic granuloma with fungal infection, Skin	Cat	國立臺灣大學獸醫專業學院
	386	54	Dermatophytic pseudomycetoma	Cat	台灣動物科技研究所
	395	56	Systemic Cryptococcus neoformans infection in a Golden Retriever	Dog	國立台灣大學分子暨比較病理生物學研究所
	441	63	Protothecosis	Dog	國家實驗動物繁殖及研究中心
	449	65	Porcine epidemic diarrhea (PED)	Piglet	國立台灣大學分子暨比較病理生物學研究所
寄生蟲	14.	2	Dirofilariasis	Dog	台灣省家畜衛生試驗所
	15.	2	Pulmonary dirofilariasis	Human	台北榮民總醫院
	20.	3	Sparganosis	Human	台北榮民總醫院
	46.	7	Feline dirofilariasis	Cat	美國紐約動物醫學中心
	49.	7	Echinococcosis	Human	台北榮民總醫院
	60.	8	Intestinal capillariasis	Human	台北馬偕醫院
	64.	8	Adenocarcinoma of sigmoid colon Old schistosomiasis of rectum	Human	省立新竹醫院
	66.	8	Echinococcosis	Chapman's zebra	台灣大學獸醫學系
	67.	9	Hepatic ascariasis and cholelithiasis	Human	彰化基督教醫院
		13	Parasitic meningoencephalitis, caused by Toxocara canis larvae migration	Dog	臺灣養豬科學研究所
		17	Disseminated strongyloidiasis	Human	花蓮佛教慈濟綜合醫院
		17	Eosinophilic meningitis caused by Angiostrongylus cantonensis	Human	台北榮民總醫院 病理檢驗部
	156	19	Parastrongylus cantonensis infection	Formosan gem-faced civet	中興大學獸醫學院
		19	Capillaria hepatica, Angiostongylus cantonensis	Norway R	行政院農業委員會 農業藥物毒物試驗所
寄生		29	Colnorchiasis	Human	高雄醫學院附設醫院
		29	Trichuriasis	Human	彰化基督教醫院

蟲		29	Psoroptes cuniculi infection (Ear mite)	Rabbit	農業藥物毒物試驗所
		29	Pulmonary dirofilariasis	Human	和信治癌中心醫院
		29	Capillaries philippinesis	Human	和信治癌中心醫院
		29	Adenocarcinoma with schistosomiasis	Human	花蓮佛教慈濟綜合醫院
		41	Etiology- consistent with *Spironucleus* (*Hexamita*) *muris*	Rat	國家實驗動物繁殖及研究中心
	327	46	Dermatitis, mange infestation	Serow	中興大學獸醫學院
寄生蟲	328	46	Trichosomoides crassicauda, urinary bladder	Rat	國家實驗動物中心
	362	51	Canine distemper virus infection combined pulmonary dirofilariasis	Dog	國家實驗研究院
	370	52	Suppurative bronchopneumonia (*Bordetellae trematum)* with *Trichosomoides crassicauda* infestation	Rat	國立中興大學獸醫學院
	416	59	Toxoplasmosis in a finless porpoise	Finless porpoise	國立屏東科技大學獸醫教學醫院病理科
		63	Liver milk spots in pig	Pig	中興大學獸醫病理生物學研究所
	453	66	Liver fluke infection	Buffalo	中興大學獸醫病理生物學研究所
	471	68	Haemosporidian parasite infection	pigeon	國立台灣大學分子暨比較病理生物學研究所
原蟲	4.	1	Cryptosporidiosis	Goat	台灣養豬科學研究所
	15.	2	Amoebiasis	Lemur fulvus	台灣養豬科學研究所
	16.	2	Toxoplasmosis	Squirrel	台灣養豬科學研究所
	17.	2	Toxoplasmosis	Pig	屏東技術學院 獸醫學系
	51.	7	Pneumocystis carinii pneumonia	Human	台北病理中心
	57.	8	Cecal coccidiosis	Chicken	中興大學獸醫學系
	65.	8	Cryptosporidiosis	Carprine	台灣養豬科學研究所
	211	30	Avian malaria, African black-footed penguin	Avian	臺灣動物科技研究所
	242	35	Neosporosis	Cow	國立屏東科技大學 獸醫學系
	263	38	Intestinal amebiasis	Human	彰化基督教醫院病理科
	320	46	Cutaneous leishmaniasis	Human	佛教慈濟綜合醫院
	325	46	Myocarditis/encephalitis, Toxoplasma gondii	Wallaby	國立臺灣大學獸醫專業學院
	443	65	Brain toxoplasmosis in a man	Human	佛教慈濟綜合醫院病理科

	462	67	Toxoplasmosis	Human	佛教慈濟綜合醫院病理科
	470	68	Leucocytozoonosis	chickens	中興大學獸醫病理生物學研究所
立克次體	229	32	Necrotizing inflammation due to scrub typhus	Human	佛教慈濟醫院病理科
	251	36	Scrub typhus with diffuse alveolar damage in bilateral lungs.	Human	佛教慈濟醫院病理科
皮膚	216	30	Cytophagic histiocytic panniculitis with terminal hemophagocytic syndrome	Human	佛教慈濟綜合醫院病理科
	359	51	Eosinophilic granuloma with fungal infection, Skin	Cat	國立臺灣大學獸醫專業學院
	360	51	Septa panniculitis with lymphocytic vasculitis	Human	慈濟綜合醫院暨慈濟大學
其它	9.	2	Perinephric pseudocyst	Cat	台灣大學獸醫學系
	10.	2	Choledochocyst	Human	長庚紀念醫院
	11.	2	Bile duct ligation	Rat	中興大學獸醫學系
	37.	4	Myositis ossificans	Human	台北醫學院
	75.	9	Acute yellow phosphorus intoxication	Rabbits	中興大學獸醫學系
	76.	10	Polycystic kidney bilateral and renal failure	Cat	美國紐約動物醫學中心
	80.	10	Glomerular sclerosis and hyalinosis, segmental, focal, chronic, moderate Benign hypertension	SHR rat	國防醫學院 & 國家實驗動物繁殖及研究中心
	83.	10	Phagolysosome-overload nephropathy	SD rats	國家實驗動物繁殖及中心
	85.	10	Renal amyloidosis	Dog	台灣養豬科學研究所
	89.	10	Severe visceral gout due to kidney damaged infectious serositis	Goose	中興大學獸醫學系
	91.	10	Hypervitaminosis D	Orange-rumped agoutis	台灣大學獸醫學系
		14	Cystic endometrical hyperplasia	Dog	臺灣養豬科學研究所
		14	Cystic subsurface epithelial structure (SES)	Dog	國科會實驗動物中心
		15	Superficial necrolytic dermatitis	Dog	美國紐約動物醫學中心
		15	Solitary congenital self-healing histiocytosis	Human	羅東博愛醫院
		15	Alopecia areata	Mouse	國家實驗動物繁殖及研究中心
		17	Avian encephalomalacia (Vitamin E deficiency)	Chicken	國立屏東科技大學獸醫學系
	151	18	Osteodystrophia fibrosa	Goat	台灣養豬科學研究所&

					台東縣家畜疾病防治所
		20	Hypertrophic cardiomyopathy	Pig	台灣大學獸醫學系
其它		21	Chinese herb nephropathy	Human	三軍總醫院病理部及腎臟科
		21	Acute pancreatitis with rhabdomyolysis	Human	慈濟醫院病理科
		21	Malakoplakia	Human	彰化基督教醫院
		25	Darier's disease	Human	高雄醫學大學病理科
	191	27	1. Polyarteritis nodosa 2. Hypertrophic Cardiomyopathy	Feline	台灣大學獸醫學系
	193	27	Norepinephrin cardiotoxicity	Cat	台中榮總
	196	27	Cardiomyopathy (Experimental)	Mice	綠色四季
	212	30	Kikuchi disease (histiocytic necrotizing lymphandenitis)	Lymphandenitis	耕莘醫院病理科
	225	32	Calcinosis circumscripta, soft tissue of the right thigh, dog	Dog	台灣大學獸醫所
	230	34	Hemochromatosis, liver, bird	Bird	台灣大學獸醫學系
	234	34	Congenital hyperplastic goiter	Holstein calves	屏東縣家畜疾病防治所
	236	34	Hepatic lipidosis (fatty liver)	Rats	中興大學獸醫學病理學研究所
	237	35	Arteriovenous malformation (AVM) of cerebrum	Human	耕莘醫院病理科
	244	35	Organophosphate induced delayed neurotoxicity in hens	Hens	中興大學獸醫學病理學研究所
	257	37	Severe lung fibrosis after chemotherapy in a child with Ataxia-Telangiectasia	Human	慈濟醫院病理科
	294	42	Arteriovenous malformation of the left hindlimb	Dog	台灣大學獸醫學系
	299	43	Polioencephalomalacia	Goat kid	屏東家畜疾病防治所
	310	44	Hyperplastic goiter	Piglet	屏東家畜疾病防治所
	311	44	Melamine and cyanuric acid contaminated pet food induced nephrotoxicity	Rat	中興大學獸醫學病理學研究所
	318	45	Alfatoxicosis	Canine	國立臺灣大學獸醫專業學院
	333	47	Lordosis, C6 to C11	Penguin	國立臺灣大學獸醫專業學院
	341	49	Pulmonary placental transmogrification	Human	羅東博愛醫院
	345	49	Acute carbofuran intoxication	Jacana	國立中興大學獸醫學院
	350	50	Malakoplakia, liver	Human	慈濟綜合醫院暨慈濟大學
	351	50	Eosionphilic granuloma, Right suboccipital epidural mass	Human	羅東博愛醫院病理科
	359	51	Eosinophilic granuloma with fungal	Cat	國立臺灣大學獸醫專業

			infection, Skin		學院
	360	51	Septa panniculitis with lymphocytic vasculitis	Human	慈濟綜合醫院暨慈濟大學
	361	51	Hepatotoxicity of SMA-AgNPs	Mouse	國立中興大學獸醫病理生物學研究所
	363	51	Hypertrophy osteopathy	Cat	國立臺灣大學獸醫專業學院
	372	52	Snake bite suspected, skin and spleen	Monkey (red guenon)	國立臺灣大學獸醫專業學院
其他	383	54	Langerhans cell histiocytosis	Human	聖馬爾定醫院病理科
	388	54	Canine protothecosis	Dog	國立臺灣大學獸醫專業學院
	392	55	Lithium nephrotoxicity	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	398	56	Gamma-knife-radiosurgery-related demyelination	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	400	56	Canine Disseminated form Granulomatous Meningoencephalitis (GME)	Dog	國立屏東科技大學獸醫教學醫院病理科
	419	60	Mucopolysaccharidosis	Cat	國立中興大學獸醫病理生物學研究所
	426	61	Phleboliths in a man	Human	台北醫學大學附設醫院口腔外科口腔病理科
	427	61	Visceral gout in a Green iguana (*Iguana iguana*)	Iguana	中興大學獸醫病理生物學研究所
	431	62	pulmonary alveolar proteinosis in a man	Human	羅東博愛醫院病理科
	432	62	Congenital pulmonary airways malformation, type 2 in a women	Human	高雄醫學大學附設醫院
	437	63	Large solitary luteinized follicular cyst of pregnancy and puerperium	Human	羅東博愛醫院病理科
	454	66	Eosinophilic granuloma	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	461	67	Intestinal emphysema	Pig	中興大學獸醫病理生物學研究所
	466	67	Nodular goiter	Human	彰化秀傳醫院病理科
	474	68	Parastrongyliaisis (Previously called Angiostrongyliasis)	squirrel	中興大學獸醫病理生物學研究所
	475	69	Bronchogenic cyst	Dog	國立臺灣大學獸醫專業學院
	480	69	Toxic pneumonitis caused by inhalation of waterproofing spray	Dog	中興大學獸醫學病理學研究所
	486	70	IgG4-related sclerosing cholangitis (ISC)	Human	天主教耕莘醫療財團法人耕莘醫院

488	70	Crohn's disease	Human	*彰化基督教醫院病理部*
Gross	64	Hydronephrosis	Pig	中興大學獸醫病理生物學研究所
Gross	65	1. Traumatic pericarditis, severe, chronic progressive, diffuse, heart. 2. Hardware disease	Cattle	中興大學獸醫病理生物學研究所

會 員 資 料 更 新 服 務

各位會員：

您好！如果您的會員資料有更新或誤刊情形，麻煩您填妥表格後寄回學會秘書處或電話連絡：

中華民國比較病理學會秘書處

張惠雯 助理教授
cscptaiwan@gmail.com
02-33661296
106 台北市羅斯福路四段一號 國立台灣大學 獸醫專業學院

----------中華民國比較病理學會----------

會員資料更改卡

姓　　名：_____　　會員類別：□一般會員
□學生會員
□贊助會員

最高學歷：_____

服務單位：_____職　　稱：_____

永久地址：_____

通訊地址：_____

電　　話：_____傳　　真：_____

E-Mail Address：_____

中 華 民 國 比 較 病 理 學 會

誠摯邀請您加入

入　會　辦　法

一、 本會會員申請資格為：

（一）一般會員：贊同本會宗旨，年滿二十歲，具有國內外大專院校（或同等學歷）生命科學及其它相關科系畢業資格或高職畢業從事生命科學相關工作滿兩年者。

（二）學生會員：贊同本會宗旨，在國內、外大專院校生命科學或其他相關科系肄業者（請檢附學生身份證明）。

（三）贊助會員：贊助本會工作之團體或個人。

（四）榮譽會員：凡對比較病理學術或會務之推廣有特殊貢獻，經理事會提名並經會員大會通過者。

二、 會員：

（一）入 會 費：一般會員新台幣壹仟元，學生會員壹佰元，贊助會員伍仟元，於入會時繳納。

（二）常年會費：一般會員新台幣壹仟元，學生會員壹佰元。

【註：學生會員身份變更為一般會員時，只需繳交一般會員之常年會費】

三、入會費及常年會費繳交方式：以銀行轉帳或匯款（**006 合作金庫銀行、帳號：0190-717-052017、戶名：中華民國比較病理學會**）；並請填妥**入會申請表**連同**銀行轉帳交易明細表**或**匯款單**以郵寄或傳真方式寄回中華民國比較病理學會秘書處 張惠雯老師收。地址：106 台北市羅斯福路四段一號 國立台灣大學 獸醫專業學院

電話：02-33661296

中華民國比較病理學會入會申請及會員卡

會電腦編號

<table>
<tr><td rowspan="3">姓名</td><td>中文</td><td></td><td rowspan="2">姓別</td><td rowspan="2">□ 男
□ 女</td><td>出生</td><td>民國　年　月　日</td><td rowspan="3">出生地</td><td rowspan="3"></td></tr>
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研究員 主任 其他:</td></tr>
<tr><td colspan="3">(2)</td><td rowspan="3">研究興趣</td><td colspan="4">(1)</td></tr>
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中華民國比較病理學會
申請人　　簽章
介紹人　　簽章
介紹人　　簽章
中華民國　　年　　月　　日</td><td>審核結果</td></tr>
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