

中華民國比較病理學會

Chinese Society of Comparative Pathology



第 48 次比較病理學研討會

國立臺灣大學獸醫專業學院

臺北市・臺灣

中華民國 99 年 3 月 13 日

48th Meeting of Comparative Pathology

School of Veterinary Medicine, National Taiwan University

Taipei, Taiwan

March 13, 2010

中華民國比較病理學會第 48 次比較病理學研討會議程表

Schedule

48th Meeting of the Chinese Society of Comparative Pathology

時間：99 年 3 月 13 日(星期六) 09:00~17:00

Date: March 13, 2010 (Sat) 09:00~17:00

地點：國立臺灣大學獸醫學系 B01 演講廳

Location: B01, School of Vet Med, NTU

地址：臺北市羅斯福路四段 1 號

Address: No. 1, Sec. 4, Roosevelt Road, Taipei

電話：02-33663858

Telephone: 02-33663858

Time 時間		Schedule 議程		Moderator 主持
08:30~09:00		Registratio 報到		
09:00~09:10		Opening Ceremony 致詞		Dr. C.H. Liu 劉振軒 理事長
09:10~09:50		Keynote 專題演講	人類乳突病毒與肺癌 李輝 研究員 國家衛生研究院環境衛生與職業醫學研究組	
09:50~10:30		Keynote 專題演講	Individualized Cancer Therapy Has Come of Age 劉興璟 助理教授 臺北醫學大學臨床醫學研究所	
10:30~10:50		Coffee Break		
10:50~11:30		Keynote 專題演講	The Diagnosis and Study of Glioma 李進成 主任 新光醫院病理檢驗科	Dr. Y.H. Hsu 許永祥 主任
11:30~12:00		Case 334 病例討論	Dr. T.T. Liu 劉婷婷 醫師 Tzu Chi University & Tzu Chi General Hosipital 佛教慈濟綜合醫院暨慈濟大學	
12:00~13:30		Lunch & Committee Meeting 午餐暨「中華民國比較病理學會理監事會議」		
13:30~14:00		Case 335 病例討論	Dr. Y.L. Chen 陳燕麟 醫師 Department of Pathology, Cardinal Tien Hospital 天主教耕莘醫院病理科	Dr. F.J. Leu 呂福江 主任
14:00~14:30		Case 336 病例討論	Dr. L.C. Chen 祝志平 醫師 Department of Pathology, Lin Shin Hospital 林新醫院病理科	
14:30~15:00		Case 337 病例討論	Dr. C.L. Hung 洪巧凌 獸醫師 School of Veterinary Medicine, National Taiwan University 國立臺灣大學獸醫專業學院	
15:00~15:20		Coffee Break		
15:20~15:50		Case 338 病例討論	Dr. C.H. Wu 吳介豪 獸醫師 College of Vet. Med., National Chung-Hsing University 國立中興大學獸醫學院	Dr. J.W. Liao 廖俊旺 教授
15:50~16:20		Case 339 病例討論	Dr. S.W. Huang 黃思偉 獸醫師 National Laboratory Animal Center 國家實驗動物中心	
16:20~17:00		Town Hall Meeting 中華民國比較病理學會會員大會		

Table of Contents (目錄)

A	Schedule (議程表).....	2
B	Table of Contents (目錄).....	3
C	Case Signalment.....	4
D	Case Diagnosis.....	5
E	Keynote Speakers.....	6
F	Comparative Pathology Case 334.....	7
	Comparative Pathology Case 335.....	12
	Comparative Pathology Case 336.....	16
	Comparative Pathology Case 337.....	20
	Comparative Pathology Case 338.....	23
	Comparative Pathology Case 339.....	28
G	中華民國比較病理學會數位式組織切片影像資料庫.....	32
H	1~48 次研討會病例分類表.....	37
I	中華民國比較病理學會章程.....	52
J	會員資料更新服務.....	56
K	入會辦法.....	58
L	Map (國立臺灣大學獸醫專業學院).....	59

中華民國比較病理學會第 48 次比較病理學研討會

Case Signalment

48th Meeting of the Chinese Society of Comparative Pathology

March 13, 2010

Case No.	Presenter	Institution	Slide No.	Signalment
Case 334	Dr. T.T. Liu 劉婷婷 醫師	Tzu Chi University & Tzu Chi General Hospital 佛教慈濟綜合醫院暨慈濟大學	A301-16	47- year-old woman
Case 335	Dr. Y.L. Chen 陳燕麟 醫師	Department of Pathology, Cardinal Tien Hospital 天主教耕莘醫院病理科	CTH	44-year-old female patient
Case 336	Dr. L.C. Chen 祝志平 醫師	Department of Pathology, Lin Shin Hospital 林新醫院病理科	S10-233	67-year-old male patient
Case 337	Dr. C.L. Hung 洪巧凌 獸醫師	School of Veterinary Medicine, National Taiwan University 國立臺灣大學獸醫專業學院	NTU09-788D	11-year-old, spayed female, mongrel canine
Case 338	Dr. C.H. Wu 吳介豪 獸醫師	College of Vet. Med., National Chung-Hsing University 國立中興大學獸醫學院	C009-835	4 year-old, male, hybrid rabbit
Case 339	Dr. S.W. Huang 黃思偉 獸醫師	National Laboratory Animal Center 國家實驗動物中心	S090982-b	5-month-old, male, Sprague Dawley rat

中華民國比較病理學會第 48 次比較病理學研討會

Case Diagnosis

48th Meeting of the Chinese Society of Comparative Pathology

March 13, 2010

Case No.	Presenter	Institution	Slide No.	Diagnosis
Case 334	Dr. T.T. Liu 劉婷婷 醫師	Tzu Chi University & Tzu Chi General Hospital 佛教慈濟綜合醫院暨慈濟大學	A301-16	Metastatic infiltrating ductal carcinoma, liver
Case 335	Dr. Y.L. Chen 陳燕麟 醫師	Department of Pathology, Cardinal Tien Hospital 天主教耕莘醫院病理科	CTH	Adenoid cystic carcinoma, grade II, Rt breast
Case 336	Dr. L.C. Chen 祝志平 醫師	Department of Pathology, Lin Shin Hospital 林新醫院病理科	S10-233	Malignant lymphoma, diffuse, large B-cell, right neck
Case 337	Dr. C.L. Hung 洪巧凌 獸醫師	School of Veterinary Medicine, National Taiwan University 國立臺灣大學獸醫專業學院	NTU09-788D	Pulmonary carcinoma, multicentric, lung
Case 338	Dr. C.H. Wu 吳介豪 獸醫師	College of Vet. Med., National Chung-Hsing University 國立中興大學獸醫學院	C009-835	Malignant melanoma, multiple organs metastasis
Case 339	Dr. S.W. Huang 黃思偉 獸醫師	National Laboratory Animal Center 國家實驗動物中心	S090982-b	Mycoplasmosis

李輝 研究員

現任：國家衛生研究院環境衛生與職業醫學研究組研究員

中山醫學大學醫學院醫學分子毒理學教授

學歷：中興大學食品科學研究所博士

經歷：中山醫學大學醫學院生物化學系系主任

中山醫學大學醫學院醫學分子毒理學研究所所長

研究興趣：

1. DDX3, LKB1, APE1, IL10 及 XPC 基因在 HPV 感染肺腫瘤化之角色。
2. HPV16/18 E6 致癌蛋白在 EGFR 發生突變之角色。
3. DNA repair (XPC, XRCC1, ERCC1, XRCC5, hOGG1, APE1) 與抗氧化 (MnSOD, GpX, Catalase) 基因表現來評估抗癌藥之敏感性對個人化醫療之可能角色。
4. 建立 E6 轉殖鼠探討 HPV E6 致癌蛋白在肺腫瘤化之角色。
5. Micro RNA 在 HPV 感染肺腫瘤化之角色。

劉興璟 助理教授

現任：臺北醫學大學臨床醫學研究所助理教授

台北市立萬芳醫院血液腫瘤科主治醫師

學歷：臺北醫學大學醫學系

明尼蘇達大學博士

經歷：臺北市立仁愛醫院內科醫師

美國明尼蘇達大學醫院血液腫瘤科臨床研究員

臺北醫學大學細胞及分子生物學研究所助理教授

內科、血液科及腫瘤內科專科醫師

研究興趣：

癌症生物學

幹細胞生物學

李進成 主任

現任：新光醫院病理檢驗科主治醫師

輔仁大學醫學系兼任副教授

學歷：英國倫敦大學神經學研究所博士

經歷：

1. 林口長庚醫院內科住院醫師
2. 台大醫院病理科住院醫師
3. 英國倫敦大學神經研究所神經病理科住院醫師
4. 馬偕醫院病理科住院醫師
5. 台北市立中興醫院解剖病理總醫師
6. 新光醫院病理檢驗科主任

Liu, T.T. (劉婷婷), M.D.; Hsu, Yung-Hsiang (許永祥), M.D.

Buddhist Tzu-Chi General Hospital and Tzu-Chi University (佛教慈濟綜合醫院暨慈濟大學)

CASE HISTORY:

Signalment: 47- year-old woman

Clinical History :

The 47-year-old woman was a victim of infiltrating ductal carcinoma of right breast, stage IV since 2000. She started to have regular OPD follow-up at HuaLien Buddhist Tzu Chi General Hospital since May 2007. Xeloda was discontinued at that time. Right shoulder pain was complained with a tender point. However, all image study including bone scan showed no relevant lesion, except one suspected metastatic lesion in lower S1. Tamoxifen was discontinued and shifted to Arimidex on May 31, 2007. In the beginning of June, a 3.5 x 2.5 x 2 cm non-tender bony prominence was noted over the right sternal angle. Lymphadenopathy with differential diagnosis of granulomatous disease was showed by CT scan. Therefore a biopsy for right chest wall was performed and revealed only necrotic tissue on July 2007. Shoulder pain and right anterior lateral chest pain with local tenderness persisted, but the following image study only showed T7 and T8 metastatic lesion. In Dec. 2007, marked hepatomegaly was noted in an OPD visit. Abdominal sonar revealed multiple metastatic lesions. She was admitted to this hospital since January 2008 for some cancer metastatic bone pain and abdominal fullness due to liver metastasis, and readmission to the ward for 3 times for continuous anti-cancer therapy in 2008. On the CT scan of Aug. 2008, progressive diffuse metastatic hepatic masses as compared with previous study on Jul. 2008. A CT guided biopsy of liver also confirmed metastatic ductal carcinoma from breast, and immunohistochemical study of the tumor cells showing ER (+), PR (+++), P53 (++) and HER-2/neu (-) on Aug. 2008. She received chemotherapy with Vinorelbine + CDDP since 2008-8-21. The abdominal CT scan of 2008-11-29 revealed slight shrinkage of liver size and the liver metastases from breast cancer but still prominent viable tumors with decompensated hepatic function and portal hypertension. She was admitted because of progressive abdominal fullness, lower leg edema for one week and black stool for 2-3 days on Dec. 29 2008. Two weeks later she was discharged and transferred to hospice ward for palliative care.

Due to progressive jaundice, generalized weakness, lymphedema of lower extremities and abdominal fullness, she was admitted for symptomatic treatment on Feb. 5, 2009. Transfusion of albumin was done for two days due to hypoalbuminemia. Lymph massage per day was given during this hospitalization. The patient's condition went downhill day by day with cachexia formation. On Feb. 22, drowsy consciousness, breathing with ruffle sounds and air hunger were noted. She expired on Feb. 23, 2009.

Gross Finding:

At autopsy, she was 64.5 kg in weight and 155 cm in length. Old surgical scar of modified radical mastectomy on right chest wall, generalized jaundice and bilateral leg pitting edema were noted. A port-A catheter over left subclavian area is found. Opening the chest and abdomen, bilateral pleural adhesion with marked adhesion in the right side, mild (about 100 C.C) serous effusion of bilateral pleural cavity respectively and over 3600 C.C serous ascites were obtained. The position of the dome of bilateral diaphragm was over 5th ICS respectively. The heart weighed 400 gm. The wall thickness of right ventricle was 0.3 cm and the one of left was 1.1 cm. The circumferences of tricuspid, pulmonary, mitral and aortic valves were 9.5 cm, 6.0 cm, 9.5 cm and 5.5 cm respectively. Pericardial adhesion with scanty pericardial effusion, fibrinous pericarditis with bread and butter appearance over pericardial space are noticed. The lumen of the aorta showed no atherosclerotic change. The right lung weighed 500 gm and the left one weighed 490 gm. There were three nodules was seen in the pleural surface of RLL. On cut, focal red consolidation involved both lungs. The liver showed hepatomegaly (1700 gm, 28 x 17 x 9.5 cm in size) with multiple disseminated tumorous lesions with marked fibrosis mimicking cirrhotic nodules. The unremarkable gallbladder measured 5 x 2 x 1.8 cm in size. The pancreas showed grossly unremarkable change. The spleen weighed 430 gm (14.7 x 9 x 5.5 cm in size) with smooth capsule and no tumor nodule. The right kidney weighed 100 gm (10.5 x 5.5 x 3.2 cm in size) and the left one weighed 130 gm (11 x 5.9 x 3.1 cm in size). In the G-I tract, hemorrhagic gastritis with petechiae on mucosa was found. The brain weighed 1300 gm and pituitary gland 0.85 gm (1.5 x 0.9 x 0.8 cm in size). There are small tumor metastatic foci over the surface of cerebellum and posterior portion of right frontal lobe. On serial sections, there are scattered foci of yellowish hued tumor metastasis within the cerebellum (the largest locus measuring up to 2 cm in dimension), left posterior pons, right occipital lobe and left basal ganglia.

Liu, T.T. (劉婷婷), M.D.; Hsu, Yung-Hsiang (許永祥), M.D.

Buddhist Tzu-Chi General Hospital and Tzu-Chi University (佛教慈濟綜合醫院暨慈濟大學)

CASE RESULT:

Microscopic Findings:

We reviewed S2007-08454 and S2008-10461. Multiple glandular cancer cells infiltrated the chest wall diagnostic of metastatic infiltrating ductal carcinoma proved by immunohistochemistry stain with CK. The liver showed metastatic infiltrating ductal carcinoma with marked desmoplasia and focal tumor necrosis with ER (+), PR (+++), P53 (++) & HER-2/neu (-). We detail studies all samples slides. This poorly differentiated infiltrating ductal carcinoma penetrated into pituitary gland, left pleura, pericardium, left hilar lymph nodes, bilateral ovaries, adrenal gland, T8 vertebra proved by CK immunohistochemistry stain, leptomenix and brain parenchyma of right frontal lobe, right occipital lobe, left pons, left basal ganglion and cerebellum. The most intrinsiting finding was in the liver. It showed massive multiple metastatic cancer nests with marked desmoplasia mimicking cirrhosis. In addition, multiple ischemic hepatocyte necrosis with intra-hepatic and sinusoid cholestasis was consistent with hepatic failure clinically. The cirrhosis complication included varicose vein of esophagus & congestive splenomegaly. The brain stem showed Alzheimer's type II astrocytes formation indicated hepatic encephalopathy clinically. The kidney showed hypokalemia associated vacuolar degeneration of proximal tubes, bile nephrosis and nephrocalcinosis. Metastatic calcification involved capillary wall of kidney, renal tubules and mucosa of stomach due to multiple bony destruction. The bone marrow showed erythroid hyperplasia with megaloblastic change. The spleen also showed extra-medullary hemopoiesis. The other findings including alveolar hemorrhage, edema and focal terminal bronchopneumonia of RLL & LLL & chronic cholecystitis and cholesterolosis of gall bladder.

Morphologic Diagnosis: Metastatic infiltrating ductal carcinoma of liver

Immunohistochemistry Stain: ER (+), PR (+++), P53 (++) & HER-2/neu (-).

Comments:

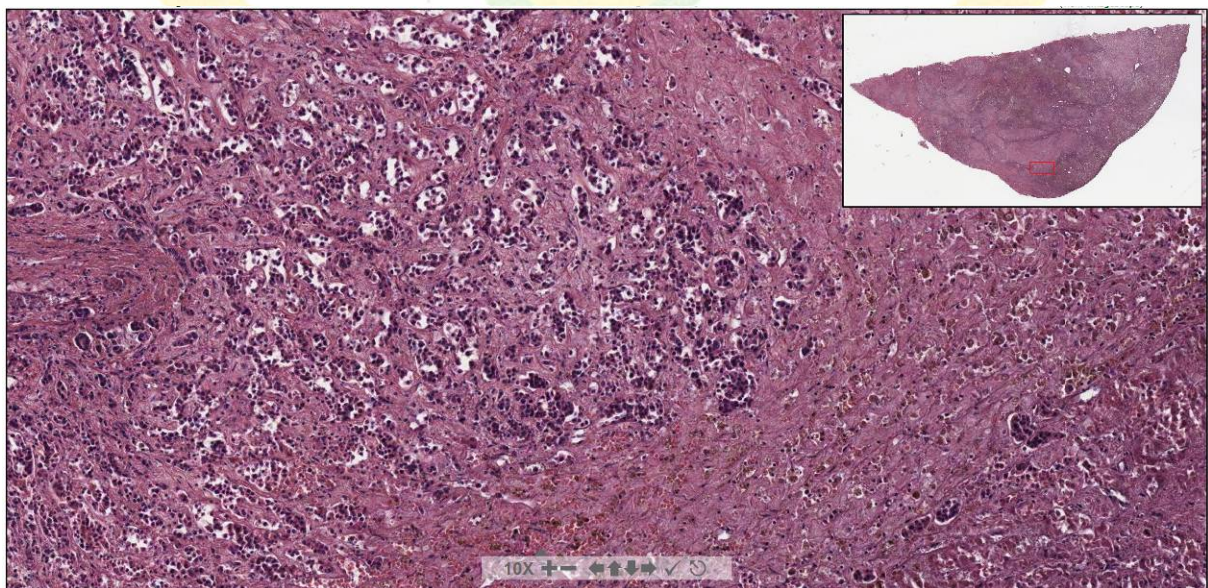
Although involvement of the liver is observed in 50% of metastatic malignancies, few patients survive long enough to develop cirrhosis from biliary obstruction perviously, 24 cases of carcinoma mimicking cirrhosis have been reported in the literature. Primary neoplasms included breast, colon, pancreas, lung, stomach, kidney, lymphoma, and adrenal gland. Including this case report, the breast was the primary site. Final admission to the hospital was usually associated with gastrointestinal bleeding, jaundice, ascites, or other symptoms of

hepatic failure, such as our case. The course of all patients was rapidly downhill, with uncontrolled esophageal bleeding or hepatic failure as the terminal event. These signs of hepatic parenchymal disease are frequently seen in patients with hepatic metastases, but manifestations of portal hypertension are rare. The liver involved with metastases is usually larger than normal. Characteristically, the surface of the liver showed many lobulations of various sizes. The characteristic histologic feature was the filtration, and intravascular and lymphatic intense, diffuse fibrosis of the liver parenchyma- embolization resulting in portal hypertension and rapidly fatal course, an additional of carcinomatous involvement of the liver resulting in a clinical picture of cirrhosis and autopsy findings of portal hypertension secondary to metastatic carcinoma of the breast is reported, such as our case. Perusal of the literature and our own institutional autopsy series indicates the relative infrequency of this complication of metastatic malignancy. Aggressive therapy directed against the malignant process might alter the course of this invariably fatal complication if tumor infiltration rather than fibrosis is a major cause of vascular obstruction. At least in patients with breast carcinoma, where usually widespread dissemination of metastatic disease is observed, there seems little indication for aggressive surgical management of the resulting portal hypertension.

Conclusion:

This 47-year-old woman suffered from right breast infiltrating ductal carcinoma with multiple metastases. This cancer also metastatic into liver mimicking cirrhosis resulted in portal hypertension and severe ascites formation. Although chemotherapy was performed, finally the breast cancer still disseminated to multiple organs. The cause of death was due to hepatic failure.

Virtual Slide:



<http://140.112.96.83:82/CSCP/48CSCP/case334/2731.svs/view.apml?ahide=1Galayer=0Garegion=0>

References:

1. Borja ER, Hori JM, Pugh RP. Metastatic carcinomatosis of the liver mimicking cirrhosis: case report and review of the literature. *Cancer*. 1975; 35(2):445-9.
2. Viguier J, De Muret A, Bacq Y. Ascites due to portal hypertension from breast cancer- related metastatic liver infiltration] *Gastroenterol Clin Biol*. 2006;30(6-7):903-5.
3. Martelli O, Coppola L, De Quarto AL, Palma M, Sarmiento R, Foggi CM. Fulminant hepatic failure caused by diffuse intrasinusoidal metastatic liver disease: a case report. *Tumori*. 2000; 86(5):424-7.



Chen, Yen-Lin (陳燕麟), M.D.; 江蓉華, M.D.; Leu, Fur-Jiang (呂福江), M.D., Ph.D.; Suen, J.H. (孫政宏), M.D.; 林進耀, M.D..

Department of Pathology, Cardinal Tien Hospital (天主教耕莘醫院病理科)

CASE HISTORY:

Signalment : 44-year-old female patient

Clinical History:

This is a 44 years old woman with a chief complaint of right breast mass at 6 o'clock position. The mass has been years and she felt getting bigger than before. There was no pain about mass but discomfort when menstruation. The echo showed a hypoechoic lesion with 1.7 x 1.8 cm in size and fibroadenoma was suggested. Mammography was not done. No other underlying disease was noted. The patient received excision surgery and post OP follow up for 4 months was good.

Gross Finding :

The specimen consisted of a piece of tissue measuring 4 x 3.5 x 3 cm in size and 25 gm in weight without lymph nodes, fixed in formalin. Grossly, nodule lesion with microcysts displayed soft in consistency and the cut surface was gray-white in color. Representative parts were taken for sections.

Laboratory Results:

CBC/DC: WNL

Biochemistry (sugar, Ca, BUN, Cr, Na, K, Cl, AST, ALT) : WNL

Chen, Yen-Lin (陳燕麟), M.D.; 江蓉華, M.D.; Leu, Fur-Jiang (呂福江), M.D., Ph.D.; Suen, J.H. (孫政宏), M.D.; 林進耀, M.D..

Department of Pathology, Cardinal Tien Hospital (天主教耕莘醫院病理科)

CASE RESULT:

Histopathologic Finding :

The sections show picture of adenoid cystic carcinoma with well differentiated tumor cells. It consists of a mixture of proliferating glands (adenoid component) with eosinophilic granular secretion and basement membrane components ("pseudoglandular" or cylindromatous component). There are cribriform, tubular and focal solid (<30%) growth pattern. The adenoid component cells have eosinophilic cytoplasm and round nuclei. The basement membrane components basaloid cells have scanty cytoplasm with round nuclei and one or two nucleoli. Shrinkage artifacts are also noted. P63 staining is positive with cribriform pattern and c-kit staining is also positive.

Immunohistochemical Stains:

p63 --- positive with cribriform pattern

CD117 --- Positive

ER/PR --- Negative

Diagnosis: Right breast, excision - adenoid cystic carcinoma, Grade II.

Differential Diagnosis:

1. invasive cribriform carcinoma
2. collagenous spherulosis

Diagnostic Criteriae:

1. Adenoid cystic carcinoma of breast is very similar to that of salivary gland.
2. Two cell components: adenoid component and basement membrane components
3. Cribriform, solid, tubular, reticular (trabecular), basaloid growth patterns
4. P63 positive with cribriform pattern and c-kit positive

Discussion:

Adenoid cystic carcinomas (ACCs) are carcinomas of low aggressive potential, histologically similar to the salivary gland counterpart . It constitute 0.1%–1% of all malignant breast tumors. The age distribution, location and presentation are similar to IDC. They have better prognosis than other breast masses.

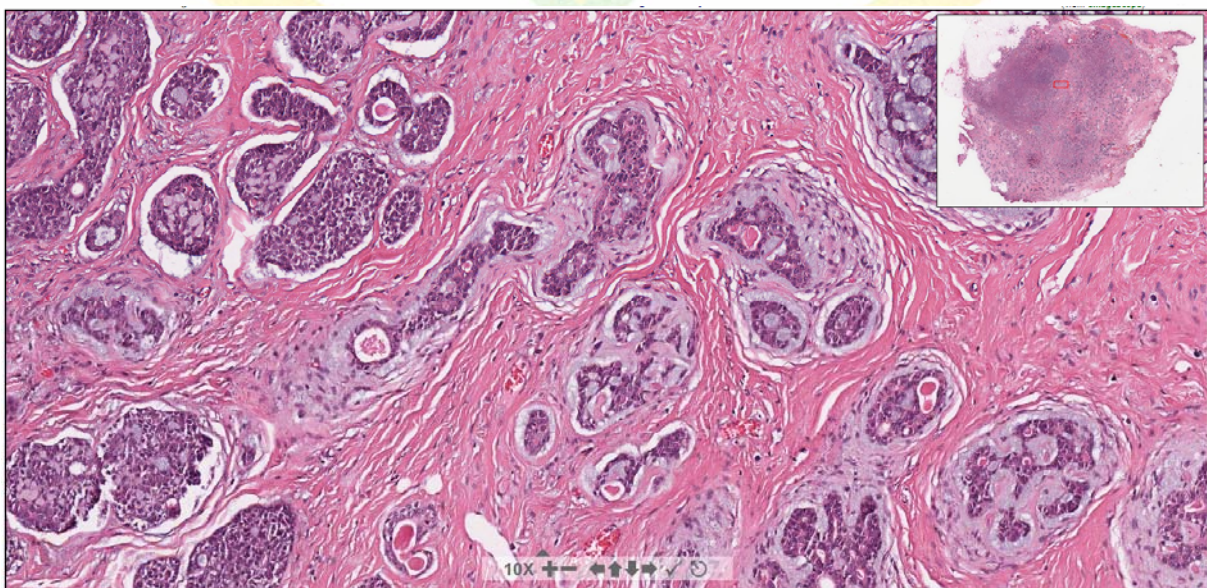
The majority of lesions measure between 1 and 3 cm. Most ACCs are circumscribed or nodular grossly. Small cystic areas are not unusual, especially in lesions smaller than 5 cm. The lesions have been variously described as gray, pale yellow, tan, and pink. ACC arises from myoepithelium-like cells and ducts. It consists of a mixture of proliferating glands (adenoid component) and basement membrane components (“pseudoglandular” or cylindromatous component). A variety of microscopic growth patterns have been described as cribriform, solid, tubular, reticular (trabecular), and basaloid. Shrinkage artifacts occur relatively often in adenoid cystic carcinoma and may be mistaken for lymphatic tumor emboli. ACC can be stratified into three grades on the basis of the proportion of solid growth within the lesion (grade I, no solid elements; grade II, less than 30% solid; and grade III, more than 30% solid).

More than 90% of ACC cells expressed c-kit and it is not expressed in invasive cribriform carcinoma and collagenous spherulosis. P63 is expressed in ACC with cribriform pattern and collagenous spherulosis with ring-like pattern but not in invasive cribriform carcinoma.

	P63	c-kit
Adenoid cystic carcinoma	+ (cribriform)	+
Invasive cribriform carcinoma	-	-
Collagenous spherulosis	+ (ring-like)	-

Axillary and distant metastases are rare with only 4 of 182 (1.7%) lymph nodes are positive. It may be considered in patients with high-grade lesions or if the tumor is larger than 3 cm. 15%–31% recurrence within 2.3–11.9 years. Tumors with a solid component (grades II and III) tended to be larger than those without a solid element (grade I), and that tumors with a solid element were more likely to have recurrences. Lung is the most common distant metastases site.

Virtual Slide:



<http://140.112.96.83:82/CSCP/48CSCP/case335/2726.svs/view.apml?ahide=1&alayer=0&aregion=0>

References :

1. Halil Alis, Hakan Yigitbas, et al. Multifocal adenoid cystic carcinoma of the breast: an unusual presentation, J can chir, Vol. 51, No 2, avril 2008
2. David L. Page, et al. Adenoid cystic carcinoma of breast, a special histopathologic type with excellent prognosis, Breast Cancer Research and Treatment (2005) 93: 189 – 190
3. Joseph T Rabban, Rebecca S Swain, et al. Immunophenotypic overlap between adenoid cystic carcinoma and collagenous spherulosis of the breast: potential diagnostic pitfalls using myoepithelial markers, Modern Pathology (2006) 19, 1351 – 1357
4. Sandy Azoulay, Marick Lae, et al. KIT is highly expressed in adenoid cystic carcinoma of the breast, a basal-like carcinoma associated with a favorable outcome , Modern Pathology (2005) 18, 1623 – 1631
5. M Pia-Foschini, et al. Salivary gland-like tumors of the breast: surgical and molecular pathology, Journal of Clinical Pathology; Jul 2003; 56, 7
6. Grazia Arpino, et al. Adenoid Cystic Carcinoma of the Breast Molecular Markers, Treatment, and Clinical Outcome, CANCER April 15, 2002 / Volume 94 / Number 8
7. World Health Organization Classification of Tumors, Pathology & Genetics, Tumors of the Breast and Female Genital Organs, 2003
8. Rosen's Breast Pathology, 3rd Edition

祝志平¹, M.D.; Hsu, Yung-Hsiang (許永祥)², M.D.

¹*Department of Pathology, Lin Shin Hospital (林新醫院病理科)*

²*Buddhist Tzu-Chi General Hospital and Tzu-Chi University (佛教慈濟綜合醫院暨慈濟大學)*

CASE HISTORY:

Signalment: 67-year-old male patient

Clinical History:

A 67 year old male suffered from right neck mass for a month. The tumor increased size rapidly. Then he went to the Dalin Branch, Tzu Chi General Hospital (大林慈濟醫院) for help. The tumor was biopsied and Ct performed. Then he was brought to our hospital for second opinion. The past history included rheumatous arthritis with drug control at LMD and subtotal thyroidectomy at Tao-Liao (Uhn-Lin) 30 years ago. Physical examination showed a supple neck. The 5 biopsy tissues, up to 0.8 x 0.6 x 0.3 cm were all for section.

Clinical Courses:

1. Jan 18- 23, 2010: Lymphoma, Stage IIIa, CHOP x 1. (WBC= 7880, Hb= 11.4) (endoxan, adriablastina, oncovia, prednisolone)
2. Feb. 4- 9: Neutropenic fever (WBC= 690, eosinophil= 0, Hb= 11.9) (LN= 2-3, 0.5 x 0.5 cm.)
3. Feb. 25-27: change CHOP to R-CEOP x 1. (Mabthera) (Endoxan, Epirubicin, Oncovia, Prednisolone)

Bone marrow Biopsy (Jan 18, 2010):

Cellularity: moderate hypocellular marrow with increased fat cells.

Cell elements: intact without excess of blast, est, < 5 %.

Erythroids: normoblastic maturation with normal hemoglobinization.

Granulopoiesis: normal with normal differentiation.

Lymphocytes: est. 16 % mature lymphocytes.

Foreign cell: not found.

Impression: lymphoma, B-cell type, without marrow infiltration.

LN Smear (Jan 18, 2010):

It showed presence of a lot of young lymphoblast est. > 70 % of total nucleated cells. Some of them showed presence of cytoplasmic vacuolization and nuclear indentation. Histiocyte increased in count and morphologically normal.

Impression: lymphoma, poorly differentiated, B-cell type. Not favor Hodgkin's disease.

祝志平¹, M.D.; Hsu, Yung-Hsiang (許永祥)², M.D.

¹*Department of Pathology, Lin Shin Hospital (林新醫院病理科)*

²*Buddhist Tzu-Chi General Hospital and Tzu-Chi University (佛教慈濟綜合醫院暨慈濟大學)*

CASE RESULT:

Histopathologic Finding :

Solid nests of neoplastic lymphoid cells with large, vesicular nuclei and prominent nucleoli.

Immunohistochemistry Surveys:

1. SW10700233: CK13, CK17; CD5, p53, CD31: (-)
2. CD10, CD20: (+)

In Situ Hybridization: EBER: (-)

Diagnosis: Soft tissue, neck, right, biopsy - malignant lymphoma, diffuse, Large B-cell.

Differential Diagnosis

1. Nasopharyngeal Carcinoma.
2. Methotrexate- associated lymphoproliferative disorders.
3. EB virus-associated anaplastic large cell variant of diffuse large B-Cell type non-Hodgkin's lymphoma. (ALCL)(DLBCL)

Diagnostic Criteria:

Low power

1. Complete sinus and interfollicular involvement.
2. Infiltration of perinodal tissues

High power

1. Variable cytology
2. large cell with vesicular nuclei, prominent nucleoli, cytoplasm variable.
3. Bizarre nuclei may be present.
4. Mitoses common.

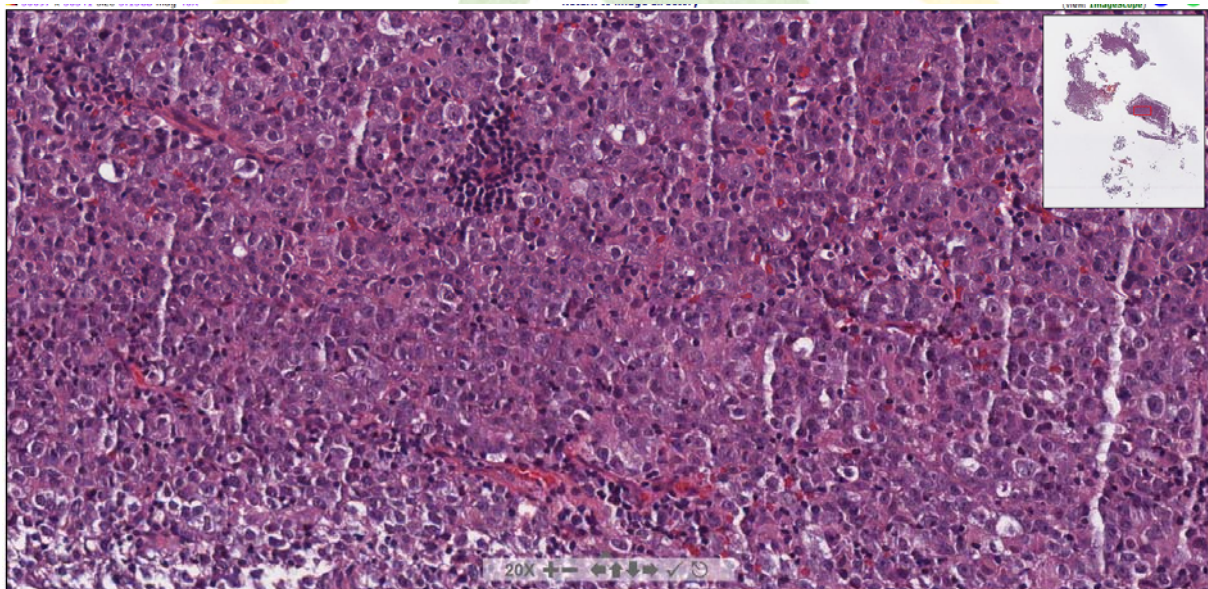
Immunophenotype:

1. CD19, CD20, CD22 , CD79a (+).
2. CD45 usually +
3. May express CD10 (25-50 %) or CD5 ((10 %)
4. Bcl-2 express in 30-50 %-associated with adverse disease free survival.

Discussion:

Lymphomas associated with EB virus arising in acquired immunodeficiency syndrome in post-organ transplantation states and during MTX therapy for RA has been described and the association of EBV with Hodgkin's disease and ALCL also has been described. 1. RA is at an increased risk of developing malignancy lymphoma, including EBV-positive lymphoma, independent of drug treatment. The number of LPDs in RA treated with methotrexate (MTX) is increasing. The etiology remains unclear, but the major role of MTX in the development of these LPDs has been demonstrated by the spontaneous remission in some RA patients following MTX withdrawal. 2. Latent viral infection of B-lymphocytes causes cell cycle dysregulation through the physical interaction of latent viral protein with normal p53 protein and through transcription activation of the p53 gene. This may be important in virus-induced lymphomagenesis.

Virtual Slide:



<http://140.112.96.83:82/CSCP/48CSCP/case336/2739.svs/view.apml?ahide=1&alayer=0&aregion=0>

References:

1. E Thomas, DH Brewster: Risk of malignancy among patients with rheumatic conditions. *Int J Cancer* 88: 497-502, 2000.
2. E Salloum, DL Cooper: Spontaneous regression of lymphoproliferative disorders in patients treated with methotrexate for rheumatoid arthritis and other rheumatic diseases. *J Clin Oncol* 14: 1943-1949, 1996.
3. Y Hirose, Y Masaki: Epstein-Barr Virus-associated anaplastic large cell variant of diffuse large B-cell type non-Hodgkin's lymphoma with concurrent p53 protein expression. *Int J Hematol* 77: 499-502, 2003..
4. OW Kamel, LM Weiss: Brief report: reversible lymphoma associated EBV occurring during MTX therapy for RA and dermatomyositis. *N Engl J Med* 328: 1317-1321, 1993.

Hung, C.L. (洪巧凌), D.V.M.; Chang, P.H. (張本恆), D.V.M., Ph.D.

School of Veterinary Medicine, National Taiwan University (國立臺灣大學獸醫專業學院)

CASE HISTORY:

Signalment: 11-year-old, spayed female, mongrel canine

Clinical History:

The patient presented with decreased spirit and appetite, fever, abdominal enlargement, pale mucous membrane, panting and weakness. Diarrhea 2-3 times per day had been noted since one week ago while anorexia had been noted for 4 days.

Gross finding:

There were three 0.3×0.3 cm grey-white foci randomly dispersed on the left anterior pulmonary lobe with irregular shape and locally extensive black patches on the right lobes. After sectioned, the white focus was well-circumscribed, and presented as a white patch of 0.2×0.3 cm in diameter, without changing the outline of lung.

Hung, C.L. (洪巧凌), D.V.M.; Chang, P.H. (張本恆), D.V.M., Ph.D.

School of Veterinary Medicine, National Taiwan University (國立臺灣大學獸醫專業學院)

CASE RESULT:

Histopathologic Finding :

There is an area showing hypercellularity in the alveolar spaces. The cells are cuboidal, low columnar or irregular shaped, and arranged in single cell or papillary-like clusters. Variable amount of eosinophilic, fibrillar cytoplasm and a lower profile of intercellular junction are noted. The nuclei are located eccentrically or in the center, appearing round, ovoid or bizarre with normochromic or vesicular chromatin pattern. Binucleated cells are occasionally seen. Anisocytosis and anisokaryosis are prominent with no mitotic figures.

Special Stains:

The tumor cells show CK positive with some individual cells showing vimentin positive.

Morphologic Diagnosis: Pulmonary carcinoma, multicentric, anterior left lobe, lung, canine.

Comment:

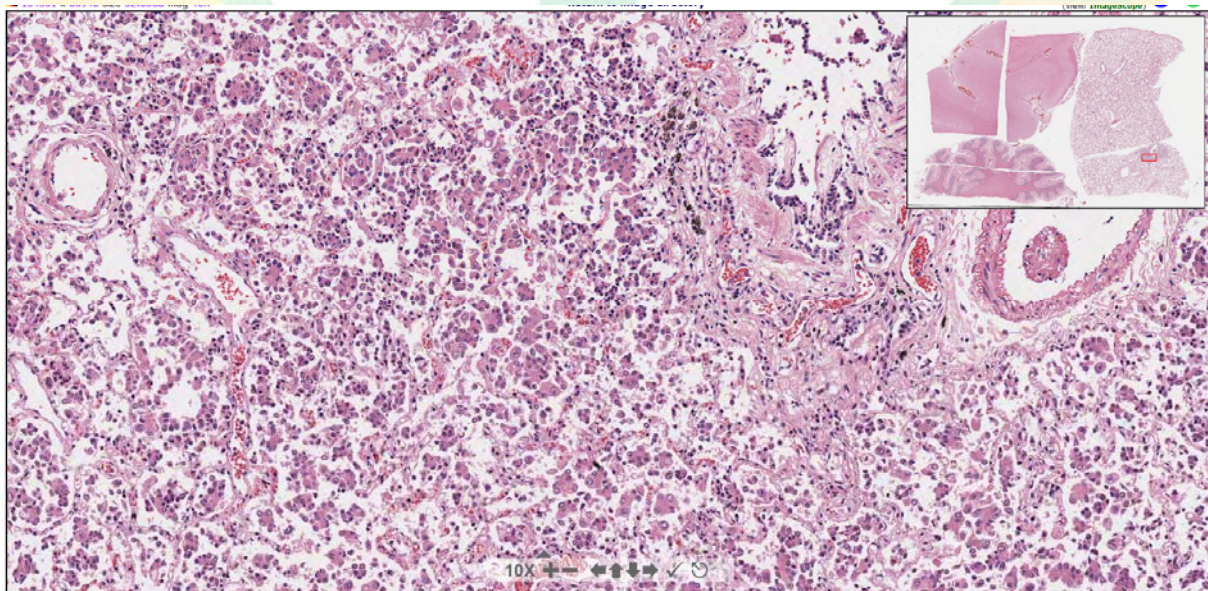
In this case, we described an 11-year-old mongrel dog with pulmonary carcinoma in the left anterior lung lobe. Pulmonary neoplasia is an infrequent finding in animals. Frequencies reported in the overall canine population range from 0.1 to 0.9 percent; however, in aging dogs, the occurrence of pulmonary tumors may reach 25 percent. According to the reports, dogs with primary lung tumors were 10.8 years old. However, anaplastic carcinomas tend to occur in younger dogs. No sex predilection has been reported in dogs. Breeds at an increased risk included of boxer, Doberman pinscher, Australian shepherd, Irish setter and Bernese mountain dog.

Because of the rarity in veterinary studies, the division of the primary pulmonary tumors is not yet fully elucidated with clear-cut definition. In general, primary pulmonary carcinomas are divided into adenocarcinoma, squamous cell carcinoma, adenosquamous carcinoma, small cell carcinoma, large cell carcinoma and combined carcinoma. Adenocarcinoma is the most common histological type in dogs and cats. There are reports suggesting that adenocarcinoma made up 74 percent to 77 percent of all primary lung tumors. Other reports suggest adenocarcinoma is more common in people and cats, and bronchioloalveolar carcinoma is more common in dogs. Squamous cell carcinoma is the most common pulmonary neoplasm in people, and is less common in companion animals, representing 6 percent and 4 percent of all of canine and feline lung tumors, respectively.

Whether a single primary growth presents in the dog, they are more frequent in the right lobes with an additional predilection in the caudal lung. Tumors of large airway origin tend to grow near the hilus and are often solitary, aggressive and large, while bronchoalveolar tumors are peripheral and can appear multicentric. The case reported here was submitted from one of the multicentric lesions at the peripheral of the anterior left lung. As a result, the tumor was more likely originated from bronchoalveola.

Microscopically, the neoplastic cells are cuboidal, low columnar or irregular shaped and arranged in an infiltrative pattern as single cell or papillary-like clusters. Variable amounts of eosinophilic, fibrillar cytoplasm and a lower profile of intercellular junction are noted. Under immunohistochemical staining, the tumor cells revealed generally CK positive, indicating its epithelial origin. There were several round individual cells with abundant cytoplasm showing vimentin positive, suggesting the involvement of alveolar macrophage. According to the growth pattern and cellular morphology, the possibilities of small cell carcinoma and combined carcinoma were ruled out. However, the mixed pattern and bizarre cellular components of the tumor made the final diagnosis challenging and difficult to group it into a specific subtype of primary pulmonary tumors. The tumor was temporarily diagnosed as pulmonary carcinoma in a dog.

Virtual Slide:



<http://140.112.96.83:82/CSCP/48CSCP/case337/3060.svs/view.apml?ahide=1&alayer=0&aregion=0>

Reference:

1. Colby TV, Koss MN, and Travis WD. Tumors of the lower respiratory tract. In: Atlas of tumor pathology. 3rd series. Armed Forces Institute of Pathology, Washinton D.C. 1995.
2. Dungworth DL, Hauser B, Hahn FF, Wilson DW, Haenichen T, and Harkema JR. Histological classification of tumors of the respiratory system of domestic animals. In: The WHO International Histological Classificatioin of Tumors of Domestic Animals. 2nd series. Vol.VI, Armed Forces Institute of Pathology, Washinton D.C. 1999.

3. Ramos-Vara JA, Miller MA, and Johnson GC. Usefulness of thyroid Transcription factor-1 immunohistochemical staining in the differential diagnosis of primary pulmonary tumors of dogs. *Vet Pathol.* 42(3): 315-320, 2005
4. Wilson DW, Dungworth DL. Tumors of the respiratory tract. In: Meuten DJ, ed. *Tumors of domestic animals.* 4th edi. Ames: Iowa State Press, 380-392, 2002.



Wu, C.H. (吳介豪)¹, D.V.M.; Kao, J.P. (高如栢)² D.V.M., M.S.; Chang, S.C. (張仕杰)², D.V.M., Ph.D.; Yang, N.Y. (楊甯雅)², D.V.M.; Yang, C.C. (楊崇君)², D.V.M.; Chang, W.F. (張文發)³, D.V.M.; Liao, J.W. (廖俊旺)^{1,3}, D.V.M., Ph.D.

¹Graduate Institute of Veterinary Pathology, ²Veterinary Medical Teaching Hospital & ³Animal Disease Diagnostic Center, National Chung Hsing University (¹中興大學獸醫病理生物學研究所、²獸醫教學醫院暨 ³動物疾病診斷中心)

CASE HISTORY:

Signalment: 4 year-old, male, hybrid rabbit

Case History:

A black-pigmented, ulcerated mass on the base of the left ear was found a hybrid pet rabbit. Clinical findings were normal. The mass was surgically excised from the rabbit for histopathologic evaluation. However, the rabbit appeared gradually depression, anorexia, dyspnea, and rapid clinical deterioration, and then died after three month of the surgery.

Gross Findings:

The biopsy mass was taken from the rabbit and was measured approximately 0.6 cm in diameter, involving the skin and subcutaneous tissues at the base of the left ear from surgery. The mass on the cut surface showed a diffusely black with ulceration and hemorrhage. At necropsy, rabbit revealed multifocal and coalescing soft, black nodules, up to 0.5 cm in diameter, and nodules were found throughout the ear, heart, liver, lung, kidney, diaphragm and lymph nodes and deeply infiltrated into the cartilage of the left ear. Unfortunately, brain was not taken due to owner request. The tissues were fixed by 10% formalin and for histopathological diagnosis.

Wu, C.H. (吳介豪)¹, D.V.M.; Kao, J.P. (高如栢)² D.V.M., M.S.; Chang, S.C. (張仕杰)², D.V.M., Ph.D.; Yang, N.Y. (楊甯雅)², D.V.M.; Yang, C.C. (楊崇君)², D.V.M.; Chang, W.F. (張文發)³, D.V.M.; Liao, J.W. (廖俊旺)^{1,3}, D.V.M., Ph.D.

¹Graduate Institute of Veterinary Pathology, ²Veterinary Medical Teaching Hospital & ³Animal Disease Diagnostic Center, National Chung Hsing University (¹中興大學獸醫病理生物學研究所、²獸醫教學醫院暨 ³動物疾病診斷中心)

CASE RESULT:

Histopathologic Finding :

In the biopsy tissue, neoplastic cells on the subcutis of ear were arranged as round to spindle shapes. Tumor cells had eosinophilic, poorly delineated cytoplasm with brown to black pigment deposition and basophilic, oval to fusiform, nuclei. Some nuclei had multiple nucleoli. Mitotic figures were not obvious observed.

In the tissues obtained from necropsy, tumor cells in the subcutis and multiple organs displayed an interwoven or whorled pattern of fusiform cells. Furthermore, neoplastic cells were also pleomorphic, polyhedral to fusiform shapes that infiltrated and surrounded normal tissues. They had foamy, eosinophilic, poorly delineated cytoplasm and basophilic, oval to fusiform, nuclei. They contained variable amounts of brown to black intracytoplasmic pigment granules. Some nuclei had multiple nucleoli. Mitotic figures were numerous. Metastatic malignant melanomas were found in the multiple organs included heart, liver, lung, kidney, diaphragm and lymph nodes. No brain was submitted to the pathology.

Immunohistochemistry Staining:

Slides of various organs with tumor lesions were treated with immunohistochemical kits of Tyrosine hydroxylase (1:200x, CHEMICO, AB152) and Dopamine transporter (1: 1000x, CHEMICO, MAB369), for one hour and then 30 min with Detection System (rabbit/mouse, peroxidase/DAB) (Dako REAL™ EnVision™, Glostrup, Denmark) and counterstained with hematoxylin and mounted. Two additional monoclonal primary antibodies against S-100 (DAKO, Z0311), and vimentin (Biogenex, San Ramon, California, USA) are preparing for the IHC staining.

Positive reactions of Tyrosine hydroxylase and Dopamine transporter were noted in tumor cells, included subcutis and metastatic organs. Two additional monoclonal primary antibodies against S-100 and vimentin are preparing for the IHC staining.

Morphologic Diagnosis: Malignant Melanoma with Multiple Organs Metastasis

Differential Diagnosis:

1. Fibrosarcoma
2. Histiocytoma

Discussion:

Melanotic tumors were from genetically altered epidermal melanocytes or melanoblasts derived from embryonal neuroectoderm. In humans and dogs, genetic factors, chromosome mutation, and exposure to ultraviolet light are thought to be the development of malignant melanoma (Benjamin et al., 2007). They are characterized as rapidly aggressive metastasis from primary tumor site to regional lymph nodes, liver and lung, and through hematogenously or via lymphatic (Kim et al., 2009). In pet rabbits, risk factors for melanomas have not been described. Dermal melanomas have been reported in a variety of domestic and wild animals. However, malignant melanoma is rare in rabbits (Hotchkiss et al., 1994). More male rabbits were found malignant melanoma than female, and the lesions were localized in head, pinna, extremities and perineum. Age is from 2 to 8 years old. The recurrence had not been described in rabbits (Von Bomhard et al., 2007). In this case, a 4-year-old male hybrid pet rabbit had consistency. The rabbit developed recurrence and metastasis, after the mass from the base of the ear were surgically excised.

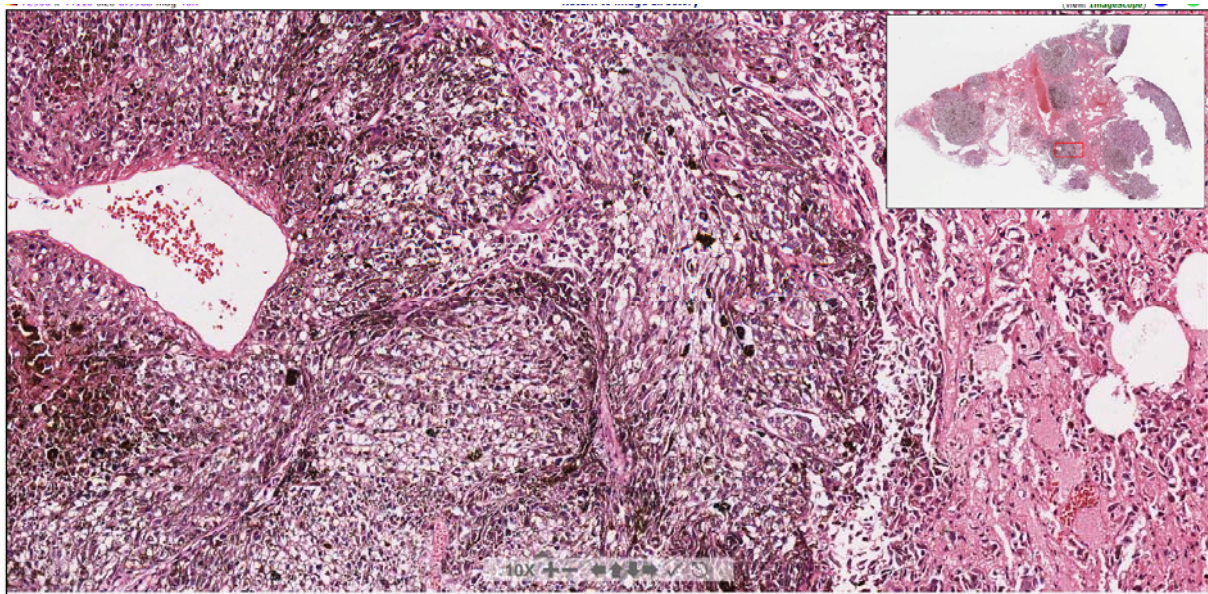
Multiple black foci of metastasis were observed in the ear, heart, liver, lung, kidney, diaphragm and lymph nodes with infiltration of the cartilage of the ear. All the masses of the rabbit appeared black grossly, and pigment was prominent histologically.

Tyrosinase and DOPA, a key enzyme in melanin biosynthesis, is a specific and sensitive marker for the detection of melanocytic lesions in formalin-fixed paraffin wax-embedded human tissues (Hofbauer et al., 1998). In this case, immunohistochemical stained positive of Tyrosinase and DOPA indicated the melanocytic cells. Histochemical silver stain for melanin and immunohistochemical stain of vimentin and S-100 are used for the diagnosis of melanoma, especially amelanotic melanoma (Sandusky et al., 1985). These stains are nonspecific. Antibodies to tyrosinase, melanosomal proteins (HMB-45), and specific melanocyte antigens (Melan A) are routinely used for diagnosis of human melanocytic tumors (Ramos-Vara et al., 2000). Criteria for the diagnostic immunohistochemistry of the melanocytic tumors are suggested as Vimentin (+), HMB45 (+), S-100 (+), Melan-A (+), Tyrosinase (+), CD63 (+), PNL2 (+), Nestin (+/-), CD117 (+/-), Pan-cytokeratin (-), PCNA or Ki-67 (high in melanoma, but very low in nervous cells) (Tuffaha, 2008).

Treatment of melanoma in rabbits used to surgically excise. In the treatment of metastatic melanoma, it had not been described in pet rabbits. Nevertheless, some therapies have been used in the treatment of melanoma in dogs. Chemotherapy and radiotherapy often kill tumor

cells by initiating a genetic suicide mechanism (apoptosis). And immunotherapy enhances a response by the body's immune cells to identify and destroy cancer cells by mechanisms that rely on direct cytotoxicity or apoptotic cell death (Modiano et al., 1999). For example, development of vaccine for canine malignant melanoma, such as allogeneic whole-cell tumor vaccine (Alexander et al., 2006), xenogeneic DNA vaccine (Bergman et al., 2006), human tyrosinase DNA vaccine (Liao et al., 2007) and melanoma cell surface antigen GD3 vaccine (Milner et al., 2006). These were proven with clinical response in the treatment of canine malignant melanoma. Recently, alternating electric tumor treating fields (TTFields) were shown to disrupt cancer cell replication that effectively inhibiting metastatic spread of tumors to the lung in the study of mice and New Zealand White rabbits (Kirson et al., 2009).

Virtual Slide:



<http://140.112.96.83:82/CSCP/48CSCP/case338/2730.svs/view.apml?ahide=1&layer=0®ion=0>

References:

1. Alexander AN, Huelsmeyer MK, Mitzey A, Dubielzig RR, Kurzman ID, Macewen EG, Vail DM. Development of an allogeneic whole-cell tumor vaccine expressing xenogeneic gp100 and its implementation in a phase II clinical trial in canine patients with malignant melanoma. *Cancer Immunol Immunother.* 55(4):433-42, 2006.
2. Benjamin CL, Melnikova VO, and Ananthaswamy HN. Models and Mechanisms in Malignant Melanoma. *Molecular Carcinogenesis.* 46:671-678, 2007.
3. Bergman PJ, Camps-Palau MA, McKnight JA, Leibman NF, Craft DM, Leung C, Liao J, Riviere I, Sadelain M, Hohenhaus AE, Gregor P, Houghton AN, Perales MA, Wolchok JD. Development of a xenogeneic DNA vaccine program for canine malignant melanoma at the Animal Medical Center. *Vaccine.* 24: 4582-4585, 2006.
4. Hofbauer GF, Kamarashev J, Geertsens R, Böni R, Dummer R. Tyrosinase immunoreactivity in formalin-fixed, paraffin-embedded primary and metastatic melanoma: frequency and distribution. *J Cutan Pathol.* 25: 204-209, 1998.
5. Hotchkiss CE, Norden H, Collins BR, and Ginn PE. Malignant melanoma in two rabbits. *Laboratory Animal Science.* 44(4): 377-379, 1994.
6. Kim DY, Royal AB, and Villamil JA. Disseminated melanoma in a dog with involvement of leptomeninges and bone marrow. *Vet Pathol.* 46: 80-83, 2009.
7. Kirson ED, Giladi M, Gurvich Z, Itzhaki A, Mordechovich D, Schneiderman RS, Wasserman Y, Ryffel B, Goldsher

- D, Palti Y. Alternating electric fields (TTFields) inhibit metastatic spread of solid tumors to the lungs. *Clin Exp Metastasis*. 26:633-640, 2009.
8. Liao JCF, Gregor P, Wolchok JD, Orlandi F, Craft D, Leung C, Houghton AN, and Bergman PJ. Vaccination with human tyrosinase DNA induces antibody responses in dogs with advanced melanoma. *Cancer Immun*. 6(8): 1-17, 2007.
 9. Milner RJ, Salute M, Crawford C, Abbot JR, Farese J. The immune response to disialoganglioside GD3 vaccination in normal dogs: a melanoma surface antigen vaccine. *Vet Immunol Immunopathol*. 15;114(3-4): 84-273, 2006.
 10. Modiano JF, Ritt MG, Wojcieszyn J. The molecular basis of canine melanoma: pathogenesis and trends in diagnosis and therapy. *J Vet Intern Med*. 13(3):74-163, 1999.
 11. Ramos-Vara JA, Beissenherz ME, Miller MA, Johnson GC, Pace LW, Fard A, Kottler SJ. Retrospective study of 338 canine oral melanomas with clinical, histologic, and immunohistochemical review of 129 cases. *Vet Pathol*. 37(6):597-608, 2000.
 12. Sandusky GE Jr, Carlton WW, Wightman KA. Immunohistochemical staining for S100 protein in the diagnosis of canine amelanotic melanoma. *Vet Pathol*. 22(6):577-81, 1985.
 13. Tuffaha MSA. 2008. Diagnostic immunohistochemistry. In: Phenotypic and Genotypic Diagnosis of Malignancies: An Immunohistochemical and Molecular Approach. Tuffaha MSA. Eds, Chapter 2, Wiley-VCH press, p. 22.
 14. Von Bomhard W, Goldschmidt MH, Shofer FS, Perl L, Rosenthal KL, and Mauldin EA. Cutaneous neoplasms in pet rabbits: a retrospective study. *Vet Pathol*. 44: 579-588, 2007.

Huang, Szu-Wei (黃思偉), D.V.M.; Ho, Pei-Yin (何蓓音), D.V.M.; Chen, Yo-Lin (陳幼嶺), D.V.M.;
Lee, Kan-Hung (李泔泓), D.V.M.; Liang, Chung-Tiang (梁鍾鼎), D.V.M.

National Laboratory Animal Center (國家實驗動物中心)

CASE HISTORY:

Signalment: 5-month-old, male, Sprague Dawley rat.

Clinical History:

The rat came from one medical center in southern Taiwan. Labored breathing, rattling, snuffling were noted, especially after hand-scratching on the back.

Gross Findings:

Affected pulmonary cranioventral areas showed dark plum-colored, and parenchyma consolidation multifocally. Increased catarrhal exudates in trachea and bronchial lumen were noted. No other lesion was noted.

Laboratory Results:

1. ELISA - positive (1/3)
2. PCR - negative (0/1)

Huang, Szu-Wei (黃思偉), D.V.M.; Ho, Pei-Yin (何蓓音), D.V.M.; Chen, Yo-Lin (陳幼嶺), D.V.M.; Lee, Kan-Hung (李泔泓), D.V.M.; Liang, Chung-Tiang (梁鍾鼎), D.V.M.

National Laboratory Animal Center (國家實驗動物中心)

CASE RESULT:

Histopathological Findings:

Histopathologically, peribronchiolar mononuclear cells cuffing was noted. These cells were large, ovoid to polyhedral, bizarre, quite a few of them showed starry sky and mitotic appearance. In addition, variable degree of neutrophils, lymphocytes and macrophages were plugging in the underlying lamina propria of nasoturbinates respiratory epithelium and epiglottis multifocally.

Diagnosis:

1. Lung and larynx: Bronchiolitis and laryngitis, mucopurulent, moderate, subacute.
2. Lung, nasoturbinate and epiglottis: lymphoid tissues hyperplasia, peribronchiolar and nasoturbinates, Sprague Dawley rat, etiology - consistent with *Mycoplasma pulmonis* infection.

Discussion:

Mycoplasmosis is primarily caused by *Mycoplasma pulmonis* which is more sensitive to rats. Mycoplasmosis has been called: murine pneumonitis, infectious catarrh, enzootic bronchiectasis, chronic respiratory disease (CRD), and chronic murine pneumonia. Transmission is by the transplacental and aerosol between cagemates. Thus, mycoplasma is one of the diseases that are hard to be cleaned from rat colonies. Concurrent infections with Sendai virus, Sialodacryoadenitis virus (SDAV), Cilia-associated respiratory (CAR) bacillus, opportunistic secondary bacteria including *Pasteurella pneumotropica*, ammonia concentrations at the cage level of greater than 25 ppm may also enhance the progression of the disease (National Research Council, 1991).

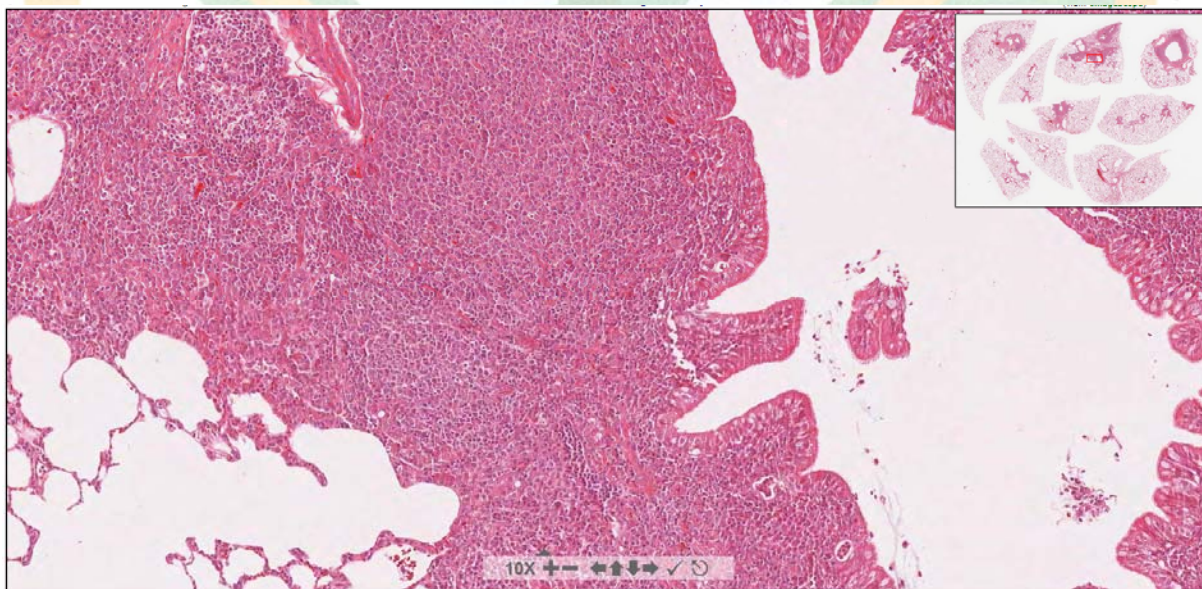
Serology and culture are widely used in the diagnosis of *M. pulmonis* infection, but discrepancies sometimes occur (Cassell et al., 1981). An advantage of ELISA is the low incidence of non-specific or false positive reactions as compared with haemagglutination inhibition (HI) (Kraft and Meyer, 1986). Discrepant results for *M. pulmonis* infection obtained by different serological tests may be due to reactive substances in the serum, such as lysozyme, antinuclear antibodies, protease and bacterial products (LaRegina et al., 1987).

Culture of *M. pulmonis* from tracheobronchial lavage fluid showed 89.6% positivity in rats and

36.5% positivity in mice in non-barrier-maintained facilities (Timenetsky and DeLuca, 1998). For routine monitoring of *M. pulmonis*, the preferred use of time-consuming culture procedures as opposed to serological testing is applicable only in acute or early infection. One-third of infected animals do not yield *M. pulmonis* in culture (Kraft et al., 1982). Culture and histopathology may be misleading in evaluating a colony of rodents for mycoplasma infection, particularly when the prevalence is low (Cox et al., 1988). *M. pulmonis* infection in the chronic stage is readily detected histopathologically (Kraft et al., 1982; Goto et al., 1994). In addition, immunohistochemical techniques using murine sera containing specific antibody have been developed for detecting *Mycoplasma pulmonis* infections in immunodeficient mice (Liang et al., 2004).

The laboratory rodents in Taiwan are contaminated with numerous infectious agents. Specifically, mouse colonies are affected by mouse parvovirus, MHV, TMEV, *Mycoplasma pulmonis*, and PVM, and rat colonies carry sialodacryoadenitis virus, PVM, Kilham rat virus, rat parvovirus, *Mycoplasma pulmonis*, or *Syphacia* spp. (Liang et al., 2009). *Mycoplasma pulmonis* infection used to be very common in mouse (35% to 91%) and rat (8% to 78%) colonies in North America in the 1990s (Casebolt et al., 1988; Kraft and Meyer, 1990; Won et al., 2003), but its prevalence and incidence has declined since then (Pritchett-Corning et al., 2009) and Taiwan alike (Liang et al., 2009).

Virtual Slide:



<http://140.112.96.83:82/CSCP/48CSCP/case339/2728.svs/view.apml?ahide=1&alayer=0&aregion=0>

References:

1. Casebolt DB, Lindsey JR, Cassell GH. 1988. Prevalence rates of infectious agents among commercial breeding populations of rats and mice. *Lab Anim Sci*, 38:327–329.
2. Cassell GH, Lindsey JR, Davis JK, Davidson MK, Brown MB, Mayo JG. 1981. Detection of natural *Mycoplasma pulmonis* infection in rats and mice by an enzyme linked immunosorbent assay (ELISA). *Lab Anim Sci*, 31, 676–682.

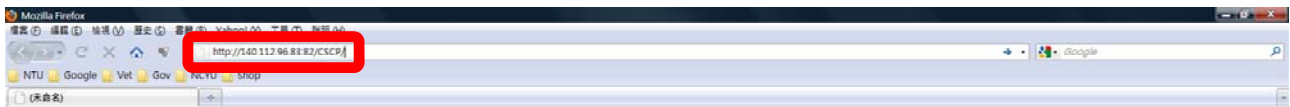
3. Cox NR, Davidson MK, Davis JK, Lindsey JR, Cassell GH. 1988. Natural mycoplasmal infections in isolator-maintained LEW/Tru rats. *Lab Anim Sci*, 38, 381–388.
4. Goto K, Kunita S, Terada E, Itoh T. 1994. Comparison of polymerase chain reaction and culture methods for detection of *Mycoplasma pulmonis* from nasal, tracheal and oral swab samples of rats. *Exp Anim*, 43, 413–415.
5. Kraft V, Meyer B, Thunert A, Deerberg F, Rehm S. 1982. Diagnosis of *Mycoplasma pulmonis* infection of rats by an indirect immunofluorescence test compared with 4 other diagnostic methods. *Lab Anim Sci*, 16, 369–373.
6. Kraft V, Meyer B. 1986. Diagnosis of murine infections in relation to test methods employed. *Lab Anim Sci*, 36, 271–276.
7. Kraft V, Meyer B. 1990. Seromonitoring in small laboratory animal colonies, a 5-year survey: 1984–1988. *Z Versuchstierkd* 33:29–35.
8. LaRegina M, Lonigro J, Steffen E. 1987. A comparison of three ELISA systems for the detection of *Mycoplasma pulmonis* antibody in rats. *Lab Anim Sci*, 37, 331–334.
9. Liang CT, Shih A, Chang YH, Liu CW, Huang YL, Huang WT, Kuang CH, Lee KH, Zhuo YX, Ho SY, Liao SL, Liang SC, Yu CK. 2009. Microbiological Contamination of Laboratory Mice and Rats in Taiwan from 2004 to 2007. *J Amer Assoc Lab Anim Sci* 48: 381–386.
10. Liang CT, Wu SC, Huang Y T, Lin YC, Chang WJ, Chou JY, Liang SC, Liu CH. 2004. Immunohistochemical diagnosis of mouse hepatitis virus and *Mycoplasma pulmonis* infection with murine antiserum. *J Comp Pathol* 131:214–220.
11. National Research Council. 1991. Infectious Disease of Mice and Rats, a Report of the Institute of Laboratory Animal Resources, Committee on Infectious Diseases of Mice and Rats, National Academy Press, WashingtonDC, pp. 33–163.
12. Pritchett-Corning KR, Cosentino J, Clifford CB. 2009. Contemporary prevalence of infectious agents in laboratory mice and rats. *Lab Anim* 43:165–173.
13. Timenetsky J, DeLuca RR. 1998. Detection of *Mycoplasma pulmonis* from rats and mice of São Paulo/SP, Brazil. *Lab Anim Sci*, 48, 210–213.
14. Won YS, Jeong ES, Park HJ, Lee CH, Nam KH, Kim HC, Hyun BH, Lee SK, Choi YK. 2006. Microbiological contamination of laboratory mice and rats in Korea from 1999 to 2003. *Exp Anim* 55:11–16.

中華民國比較病理學會數位式組織切片影像資料庫

How-To Access Chinese Society of Comparative Pathology Virtual Slides at the Web Library in NTU Vet Med Digital Pathology Lab

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

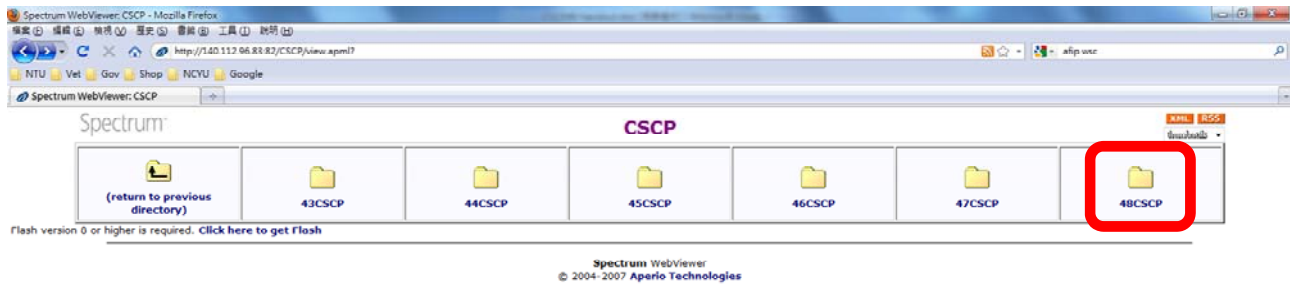
1. Please make sure that your web browser (e.g. Internet Explorer, Firefox or Safari) is equipped with "flash player." If not, it can be added from <http://www.adobe.com/products/flashplayer/> for free.
2. Please go to the NTU Vet Med Digital Pathology Lab web site at <http://140.112.96.83:82/CSCP/> with your web browser.



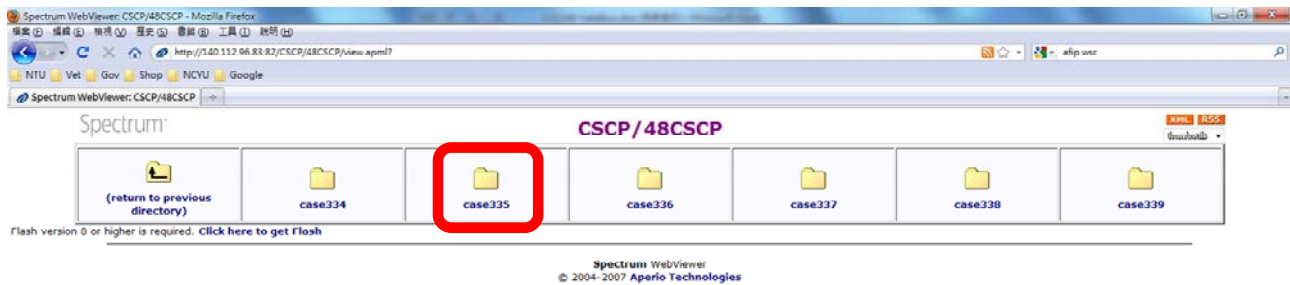
3. A pop-up window appears to ask for "User name" and "Password." Enter "guest" for both boxes.



4. Choose a Comparative Pathology meeting (e.g. 48CSCP)



5. Pick any case you'd like to read (e.g. case335).

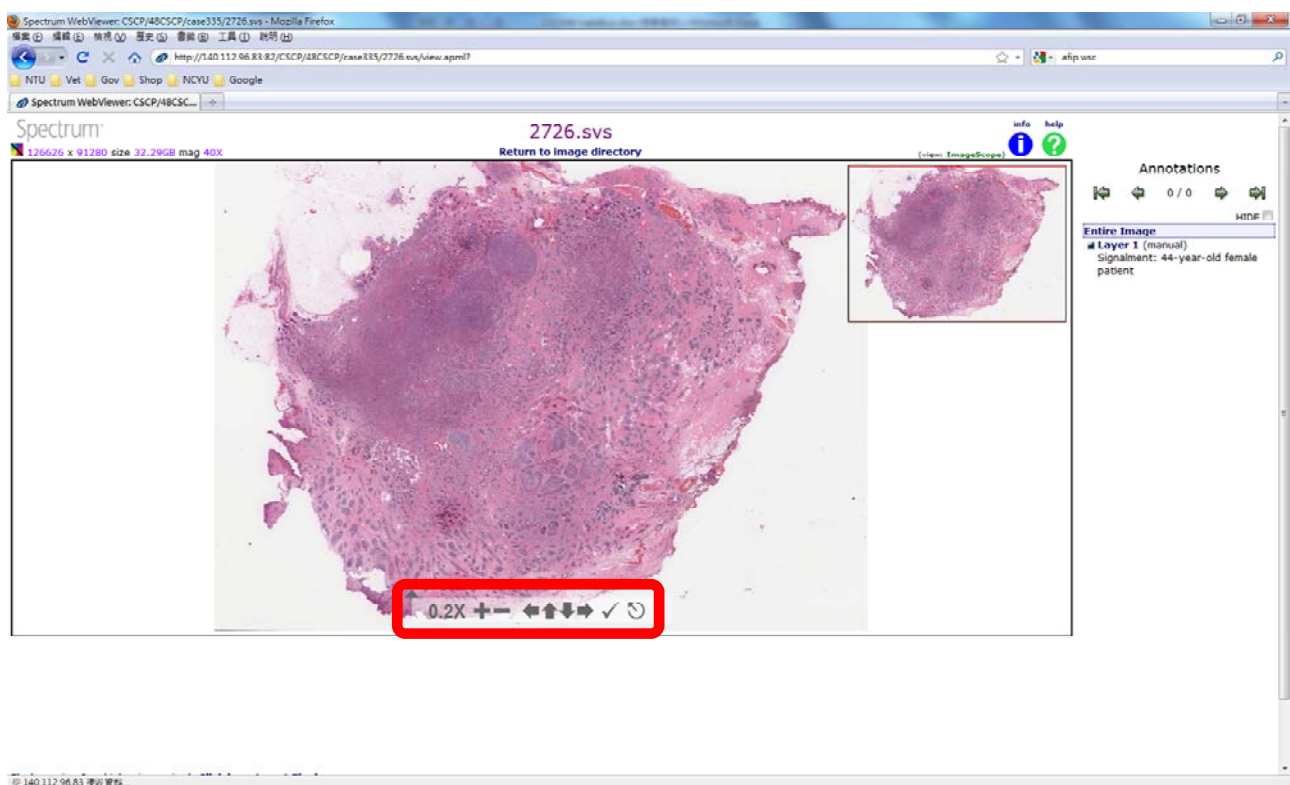


6. Click on "WebViewer" right lower to the slide thumbnail.



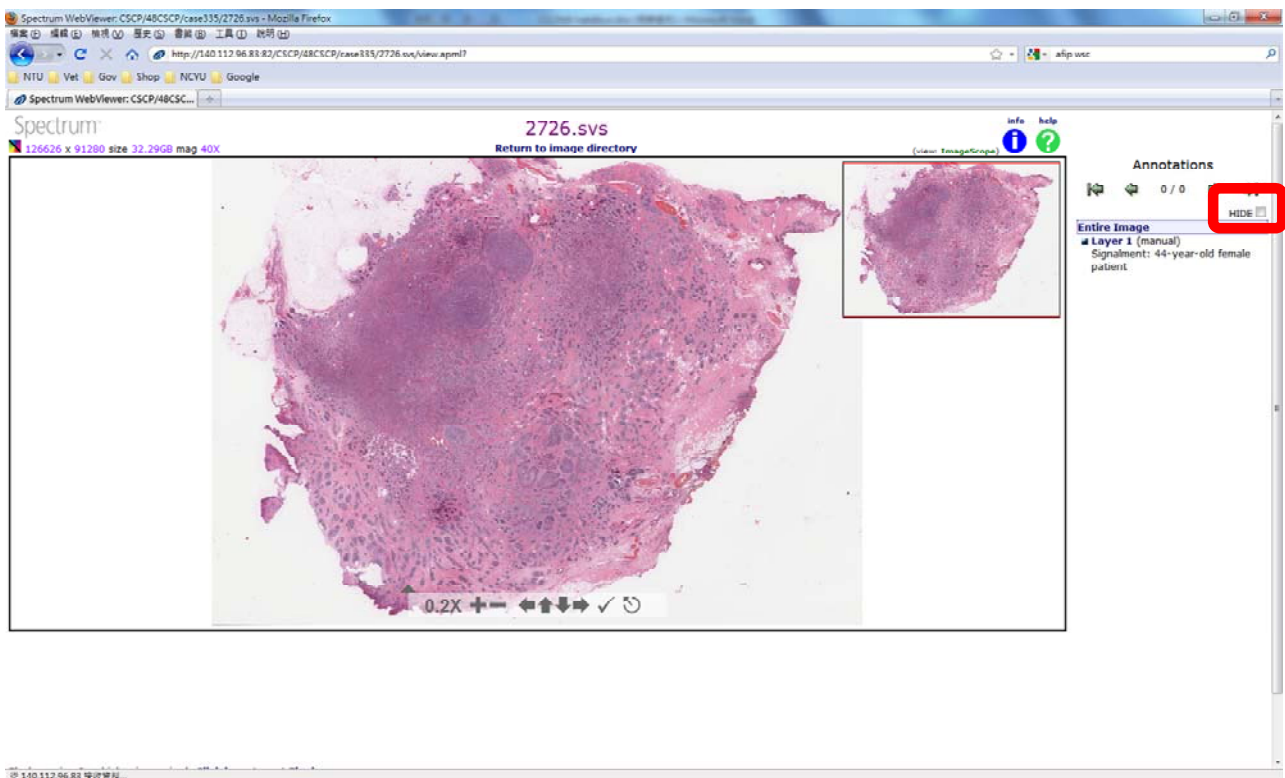
亮版

7. You now can control the "internet microscope" to view the slide with your mouse and the control-icons at the lower center corner of the window. The signalment of the case is shown in the "Annotation" column on the right.

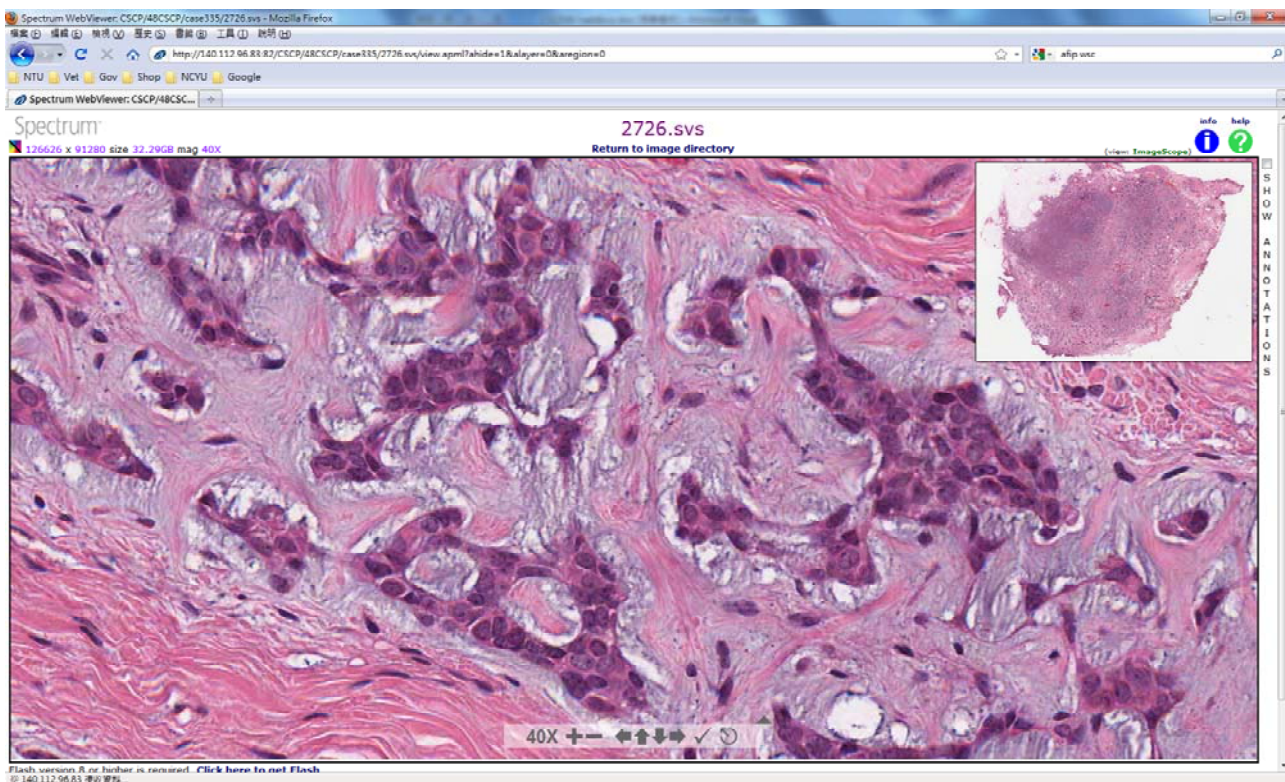


140.112.96.83 遠端資料

8. To maximize your viewing window, you may choice to hide the “Annotation” column by click on the square box at the right upper corner of the window.



9. The highest resolution is at 40X objective at any corner of the slide showing on the thumbnail. There is a red square in the thumbnail to tell you where you are on the slide.

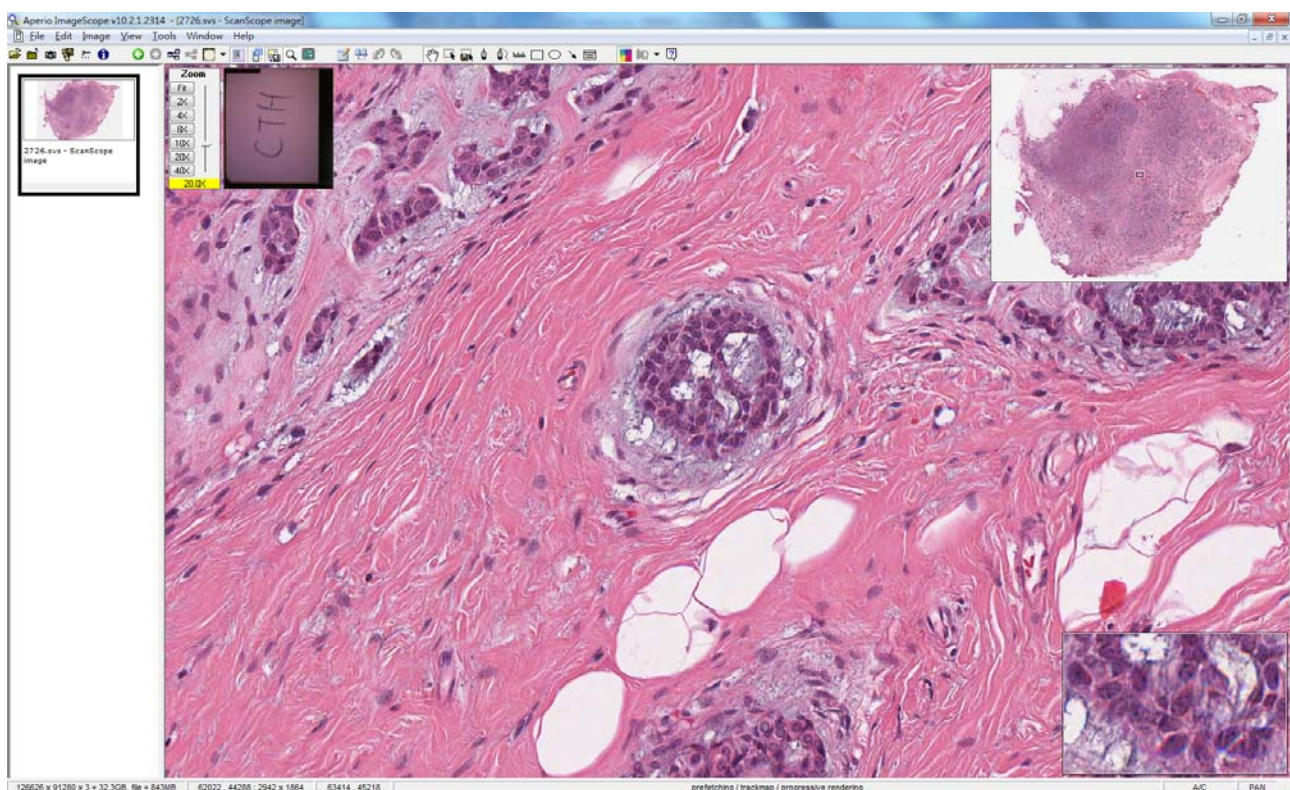


9. You may also choose to read the slides with a free "ImageScope" software by clicking on "ImageScope" left lower to the slide thumbnail. Follow the instruction appears in a pop-up window to download and install the software if you have not done so.



<http://140.112.96.83:82/CSCP/48CSCP/case335/2726.svs/view.apml?>

10. Some of us find that our viewing experience on the slides is better with the "ImageScope" software than with a web browser.



中華民國比較病理學會
第一次至第四十八次比較病理學研討會病例分類一覽表

分 類	病例 編號	診 斷	動物別	提 供 單 位
腫 瘤	1.	Myxoma	Dog	美國紐約動物醫學中心
	2.	Chordoma	Ferret	美國紐約動物醫學中心
	3.	Ependymoblastoma	Human	長庚紀念醫院
	8.	Synovial sarcoma	Pigeon	美國紐約動物醫學中心
	18.	Malignant lymphoma	Human	長庚紀念醫院
	19.	Malignant lymphoma	Wistar rat	國家實驗動物繁殖及研究中心
	24.	Metastatic thyroid carcinoma	Human	省立新竹醫院
	25.	Chordoma	Human	新光吳火獅紀念醫院
	34.	Interstitial cell tumor	Dog	中興大學獸醫學系
	35.	Carcinoid tumor	Human	長庚紀念醫院
	36.	Hepatic carcinoid	Siamese cat	美國紐約動物醫學中心
	38.	Pheochromocytoma	Ferret	美國紐約動物醫學中心
	39.	Extra adrenal pheochromocytoma	Human	新光吳火獅紀念醫院
	40.	Mammary gland fibroadenoma	Rat	國家實驗動物繁殖及研究中心
	41.	Fibroadenoma	Human	省立豐原醫院
	42.	Canine benign mixed type mammary gland tumor	Pointer bitch	中興大學獸醫學系
	43.	Phyllodes tumor	Human	台中榮民總醫院
	44.	Canine oral papilloma	Dog	國立臺灣大學獸醫專業學院
	45.	Squamous cell papilloma	Human	中國醫藥學院
	47.	Lung: metastatic carcinoma associated with cryptococcal infection. Liver: metastatic carcinoma. Adrenal gland, right: carcinoma (primary)	Human	三軍總醫院
	56.	Gastrointestinal stromal tumor	Human	台中榮民總醫院

59.	Colonic adenocarcinoma	Dog	美國紐約動物醫學中心
62.	Submucosal leiomyoma of stomach	Human	頭份為恭紀念醫院
64.	1.Adenocarcinoma of sigmoid colon 2.Old schistosomiasis of rectum	Human	省立新竹醫院
71.	Myelolipoma	Human	天主教耕莘醫院
72.	Reticulum cell sarcoma	Mouse	國家實驗動物繁殖及研究中心
73.	Hepatocellular carcinoma	Human	新光吳火獅紀念醫院
74.	Hepatocellular carcinoma induced by aflatoxin B1	Wistar strain rats	台灣省農業藥物毒物試驗所
81.	Angiomyolipoma	Human	羅東博愛醫院病理科
82.	Inverted papilloma of prostatic urethra	Human	省立新竹醫院
84.	Nephrogenic adenoma	Human	國泰醫院
86.	Multiple myeloma with systemic amyloidosis	Human	佛教慈濟綜合醫院
87.	Squamous cell carcinoma of renal pelvis and calyces with extension to the ureter	Human	台北病理中心
88.	Fibroepithelial polyp of the ureter	Human	天主教耕莘醫院
90.	Clear cell sarcoma of kidney	Human	台北醫學院
93.	Mammary gland adenocarcinoma, complex type , with chondromucinous differentiation	Dog	國立臺灣大學獸醫專科
94.	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, papillary carcinoma, metastatic	Human	羅東聖母醫院
95.	Transmissible venereal tumor	Dog	中興大學獸醫學系
96.	Malignant lymphoma, large cell type, diffuse, B-cell phenotype	Human	彰化基督教醫院
97.	Carcinosarcomas	Tiger	台灣養豬科學研究所
98.	Mucinous carcinoma with intraductal carcinoma	Human	省立豐原醫院
99.	Mammary gland adenocarcinoma, type	Mouse	國家實驗動物繁殖及研究中心

	B, with pulmonary metastasis, BALB/cBYJ mouse		中心
100.	Malignant fibrous histiocytoma and paraffinoma	Human	中國醫藥學院
102.	Pleomorphic adenoma (benign mixed tumor)	Human	佛教慈濟綜合醫院
103.	Atypical central neurocytoma	Human	新光吳火獅紀念醫院
104.	Cardiac schwannoma	SD rat	國家實驗動物繁殖及 研究中心
109.	Desmoplastic infantile ganglioglioma	Human	高雄醫學院
107.	1.Primary cerebral malignant lymphoma 2.Acquired immune deficiency syndrome	Human	台北市立仁愛醫院
111.	Schwannoma	Human	三軍總醫院
114.	Osteosarcoma	Dog	美國紐約動物醫學中 心
115.	Mixed germ-cell stromal tumor, mixed sertoli cell and seminoma-like cell tumor	Dog	美國紐約動物醫學中 心
116.	Krukenberg's Tumor	Human	台北病理中心
117.	Primary insular carcinoid tumor arising from cystic teratoma of ovary.	Human	佛教慈濟綜合醫院
119.	Polypoid adenomyoma	Human	大甲李綜合醫院
120.	Gonadal stromal tumor	Human	天主教耕莘醫院
122.	Gestational choriocarcinoma	Human	彰化基督教醫院
123.	Ovarian granulosa cell tumor	Horse	中興大學獸醫學系
129.	Kaposi' s sarcoma	Human	華濟醫院
131.	Basal cell carcinoma (BCC)	Human	羅東聖母醫院
132.	Transmissible venereal tumor	Dog	國立臺灣大學獸醫專 業學院
137	Canine Glioblastoma Multiforme in Cerebellopontine Angle	Dog	中興大學獸醫病理研 究所
143	Osteosarcoma associated with metallic implants	Dog	紐約動物醫學中心
144	Radiation-induced osteogenic sarcoma	Human	佛教慈濟綜合醫院
145	Osteosarcoma, osteogenic	Dog	國立臺灣大學獸醫專 業學院
146	Pleomorphic rhabdomyosarcoma	Human	行政院衛生署新竹醫 院

147	Papillary Mesothelioma of pericardium	Leopard	屏東科大學獸醫學系
148	Cystic ameloblastoma	Human	台北醫學院
149	Giant cell tumor of bone	Canine	中興大學獸醫學院
150	Desmoplastic small round cell tumor (DSRCT)	Human	華濟醫院
152	Hepatocellular carcinoma	Human	羅東聖母醫院
158	Hemangiopericytoma	Human	羅東聖母醫院
160	Cardiac fibroma	Human	高雄醫學大學病理學科
166	Nephroblastoma	Rabbit	紐約動物醫學中心
168	Nephroblastoma	Pig	台灣動物科技研究所
169	Nephroblastoma with rhabdomyoblastic differentiation	Human	高雄醫學大學病理科
172	Spindle cell sarcoma	Human	羅東聖母醫院
174	Juxtaglomerular cell tumor	Human	新光醫院病理檢驗科
190	Angiosarcoma	Human	高雄醫學大學病理學科
192	Cardiac myxoma	Human	彰化基督教醫院病理科
194	Kasabach-Merritt syndrome	Human	佛教慈濟綜合醫院
195	Metastatic hepatocellular carcinoma, right atrium	Human	新光醫院病理科
197	Papillary fibroelastoma of aortic valve	Human	新光醫院病理科
198	Extraplacental chorioangioma	Human	天主教耕莘醫院
208	Granulocytic sarcoma (Chloroma) of uterine cervix	Human	高雄醫學大學病理學科
210	Primary non-Hodgkin' s lymphoma of bone, diffuse large B cell, right humerus	Lymphoma	彰化基督教醫院病理科
213	Lymphoma, multi-centric type	Dog	中興大學獸醫系
214	CD30 (Ki-1)-positive anaplastic large cell lymphoma (ALCL)	Human	新光醫院病理科
215	Lymphoma, mixed type	Koala	國立臺灣大學獸醫專業學院
217	Mucosal associated lymphoid tissue (MALT) lymphoma, small intestine	Cat	國立臺灣大學獸醫專業學院
218	Nasal type NK/T cell lymphoma	Human	高雄醫學大學病理科
222	Acquired immunodeficiency syndrome (AIDS)with disseminated Kaposi' s sarcoma	Human	佛教慈濟綜合醫院
224	Epithelioid sarcoma	Human	彰化基督教醫院病理

			科
226	Cutaneous B cell lymphoma , eyelid , bilateral	Human	羅東聖母醫院病理科
227	Extramammary Paget' s disease (EMPD) of the scrotum	Human	萬芳北醫皮膚科,病理科
228	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
231	Malignant melanoma, metastasis to intra-abdominal cavity	Human	天主教耕莘醫院
232	Vaccine-associated rhabdomyosarcoma	Cat	國立臺灣大學獸醫專業學院
233	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
235	1. Neurofibromatosis, type I 2. Malignant peripheral nerve sheath tumor (MPNST)	Human	佛教慈濟綜合醫院
239	Glioblastoma multiforme	Human	羅東聖母醫院
240	Pineoblastoma	Wistar rat	綠色四季
241	Chordoid meningioma	Human	高醫病理科
243	Infiltrating lobular carcinoma of left breast with meningeal carcinomatosis and brain metastasis	Human	佛教慈濟綜合醫院
245	Microcystic Meningioma.	Human	天主教耕莘醫院
247	Well-differentiated fetal adenocarcinoma without lymph node metastasis	Human	新光吳火獅紀念醫院
249	Adenocarcinoma of lung.	Human	羅東聖母醫院
252	Renal cell carcinoma	Canine	國立臺灣大學獸醫專業學院
253	Clear cell variant of squamous cell carcinoma, lung	Human	高雄醫學大學附設中和醫院病理科
256	Metastatic adrenal cortical carcinoma	Human	天主教耕莘醫院
258	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
262	Medullar thyroid carcinoma	Canine	國立臺灣大學獸醫專

			業學院
264	Merkel cell carcinoma	Human	羅東博愛醫院
266	Cholangiocarcinoma	Human	天主教耕莘醫院
268	Sarcomatoid carcinoma of renal pelvis	Human	佛教慈濟綜合醫院
269	Mammary Carcinoma	Canine	中興大學獸醫學系
270	Metastatic prostatic adenocarcinoma	Human	天主教耕莘醫院
271	Malignant canine peripheral nerve sheath tumors	Canine	國立臺灣大學獸醫專業學院
272	Sarcomatoid carcinoma, lung	Human	羅東聖母醫院
273	Vertebra, T12, laminectomy, metastatic adenoid cystic carcinoma	Human	彰化基督教醫院
274	rhabdomyosarcoma	Canine	國立臺灣大學獸醫專業學院
275	Fetal rhabdomyosarcoma	SD Rat	中興大學獸醫學系
276	Adenocarcinoma, metastatic, iris, eye	Human	高雄醫學大學
277	Axillary lymph node metastasis from an occult breast cancer	Human	羅東博愛醫院病理科
278	Hepatocellular carcinoma	Human	國軍桃園總醫院
279	Feline diffuse iris melanoma	Feline	中興大學獸醫學系
280	Metastatic malignant melanoma in the brain and inguinal lymph node	Human	佛教慈濟綜合醫院
281	Tonsil Angiosarcoma	Human	羅東博愛醫院病理科
282	Malignant mixed mullerian tumor	Human	天主教耕莘醫院
283	Renal cell tumor	Rat	中興大學獸醫學系
284	Multiple Myeloma	Human	佛教慈濟綜合醫院
285	Myopericytoma	Human	新光吳火獅紀念醫院
287	Extramedullary plasmacytoma with amyloidosis	Canine	國立臺灣大學獸醫專業學院
288	Metastatic follicular carcinoma	Human	羅東聖母醫院病理科
289	Primitive neuroectodermal tumor (PNET), T-spine.	Human	羅東博愛醫院病理科
292	Hemangioendothelioma of bone	Human	佛教慈濟綜合醫院
293	Malignant tumor with perivascular epithelioid differentiation, favored malignant PEComa	Human	彰化基督教醫院
297	Mucin-producing cholangiocarcinoma	Human	基隆長庚醫院
300	Cutaneous epitheliotropic lymphoma	Canine	國立臺灣大學獸醫專業學院
301	Cholangiocarcinoma	Felis Lynx	國立臺灣大學獸醫專業學院

	302	Lymphoma	Canine	國立臺灣大學獸醫專業學院
	303	Solitary fibrous tumor	Human	彰化基督教醫院
	304	Multiple sarcoma	Canine	國立臺灣大學獸醫專業學院
	306	Malignant solitary fibrous tumor of pleura	Human	佛教慈濟綜合醫院
	307	Carcinoma with thymus-like element	Human	彰濱秀傳紀念醫院
	308	Medullary carcinoma of right lobe of thyroid	Human	彰化基督教醫院
	309	Thyroid carcinosarcoma with cartilage and osteoid formation	Canine	國立臺灣大學獸醫專業學院
	312	Systemic T- lymphocytic leukemia/lymphoma	Koala	國立臺灣大學獸醫專業學院
	313	Neuroendocrine carcinoma of liver	Human	佛教慈濟綜合醫院
	314	Parachordoma	Human	羅東博愛醫院病理科
	315	Carcinoma ex pleomorphic adenoma, submandibular gland	Human	天主教耕莘醫院
	316	Melanoma, tongue	Canine	國立臺灣大學獸醫專業學院
	317	Renal cell carcinoma, papillary type	Canine	國立臺灣大學獸醫專業學院
	323	Metastatic papillary serous cystadenocarcinoma, abdomen	Human	國軍桃園總醫院
	324	Malignant gastrointestinal stromal tumor	Human	天主教耕莘醫院
	329	Sclerosing stromal tumor	Human	彰化基督教醫院
	330	Pheochromocytoma	Human	天主教耕莘醫院
	334	Metastatic infiltrating ductal carcinoma, liver	Human	佛教慈濟綜合醫院
	335	Adenoid cystic carcinoma, grade II, Rt breast	Human	天主教耕莘醫院
	336	Malignant lymphoma, diffuse, large B-cell, right neck	Human	林新醫院
	337	Pulmonary carcinoma, multicentric	Dog	國立臺灣大學獸醫專業學院
	338	Malignant melanoma, multiple organs metastasis	Rabbit	國立中興大學獸醫學院
細菌	6.	Tuberculosis	Monkey	國立臺灣大學獸醫專業學院

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

			所
161	Porcine polyserositis and arthritis (Glasser's disease)	Pig	中興大學獸醫學院
162	Mycotic aneurysm of jejunal artery secondary to infective endocarditis	Human	佛教慈濟綜合醫院
170	Chronic nephritis caused by <i>Leptospira</i> spp	Pig	中興大學獸醫學院
173	Ureteropyelitis and cystitis	Pig	中國化學製藥公司
254	Pulmonary actinomycosis.	Human	天主教耕莘醫院
259	Tuberculous peritonitis	Human	彰化基督教醫院病理 科
260	Septicemic salmonellosis	Piglet	屏東科技大學獸醫系
261	Leptospirosis	Human	佛教慈濟綜合醫院
267	Mycobacteriosis	Soft turtles	屏東科技大學獸醫系
290	<i>Staphylococcus</i> spp. infection	Formosa Macaque	中興大學獸醫病理學 研究所
291	Leptospirosis	Dog	國立臺灣大學獸醫專 業學院
296	Leptospirosis	Human	佛教慈濟綜合醫院
305	Cryptococcus and Tuberculosis	Human	彰濱秀傳紀念醫院
319	Placentitis, <i>Coxiella burnetii</i>	Goat	台灣動物科技研究所
321	Pneumonia, <i>Buirkholderia pseudomallei</i>	Goat	屏東縣家畜疾病防治 所
339	Mycoplasmosis	Rat	國家實驗動物中心
病毒	21. Newcastle disease	Chickens	國立臺灣大學獸醫專 業學院
	22. Herpesvirus infection	Goldfish	國立臺灣大學獸醫專 業學院
	30. Demyelinating canine distemper encephalitis	Dog	台灣養豬科學研究所
	31. Adenovirus infection	Malayan sun bears	國立臺灣大學獸醫專 業學院
	50. Porcine cytomegalovirus infection	Piglet	台灣省家畜衛生試驗 所
	55. Infectious laryngo-tracheitis (Herpesvirus infection)	Broilers	國立屏東技術學院獸 醫學系
	69. Pseudorabies (Herpesvirus infection)	Pig	台灣養豬科學研究所
	78. Marek's disease in native chicken	Chicken	屏東縣家畜疾病防治 所
	92. Foot- and- mouth disease (FMD)	Pig	屏東縣家畜疾病防治

			所
101.	Swine pox	Pig	屏東科技大學獸醫學系
110.	Pseudorabies	Piglet	國立屏東科技大學
112.	Avian encephalomyelitis	Chicken	國立中興大學
128.	Contagious pustular dermatitis	Goat	屏東縣G台東縣家畜疾病防治所
130.	Fowl pox and Marek's disease	Chicken	中興大學獸醫學系
133.	Japanese encephalitis	Human	佛教慈濟綜合醫院
136	Viral encephalitis, polyomavirus infection	Lory	美國紐約動物醫學中心
138	1.Aspergillus spp. encephalitis and myocarditis 2.Demyelinating canine distemper encephalitis	Dog	國立臺灣大學獸醫專業學院
153	Enterovirus 71 infection	Human	彰化基督教醫院
154	Ebola virus infection	African Green monkey	行政院國家科學委員會實驗動物中心
155	Rabies	Longhorn Steer	國立臺灣大學獸醫專業學院
163	Parvoviral myocarditis	Goose	屏東科技大學獸醫學系
199	SARS	Human	台大醫院病理科
200	TGE virus	swine	臺灣動物科技研究所
201	Feline infectious peritonitis(FIP)	Feline	國立臺灣大學獸醫專業學院
209	Chicken Infectious Anemia (CIA)	Layer	屏東防治所
219	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	Cytomegalovirus colitis	Human	彰化基督教醫院病理科
221	Canine distemper virus Canine adenovirus type II co-infection	Canine	國家實驗動物繁殖及研究中心
223	1. Skin, mucocutaneous junction (lip):	Goat	台灣動物科技研究所

	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.		
	238 Hydranencephaly	Cattle	國立屏東科技大學獸醫學系
	248 Porcine Cytomegalovirus (PCMV) infection	Swine	國立屏東科技大學獸醫學系
	250 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 <i>Salmonella typhimurium</i> .	Swine	屏東縣家畜疾病防所
	255 Vaccine-induced canine distemper	gray foxes	國立臺灣大學獸醫專業學院
	265 Bronchointerstitial pneumonia (PCV II infection)	Swine	國立臺灣大學獸醫專業學院
	295 Feline infectious peritonitis (FIP)	Cat	中興大學獸醫病理所
黴菌	23. Chromomycosis	Human	台北病理中心
	47. Lung: metastatic carcinoma associated with cryptococcal infection. Liver: metastatic carcinoma. Adrenal gland, right: carcinoma (primary)	Human	三軍總醫院
	48. Adiaspiromycosis	Wild rodents	國立臺灣大學獸醫專業學院
	52. Aspergillosis	Goslings	屏東縣家畜疾病防治所
	53. Intracavitary aspergilloma and cavitary tuberculosis, lung.	Human	羅東聖母醫院
	54. Fibrocalcified pulmonary TB, left Apex.	Human	林口長庚紀念醫院

	Mixed actinomycosis and aspergillosis lung infection with abscess DM, NIDDM.			
105.	Mucormycosis Diabetes mellitus	Human	佛教慈濟綜合醫院	
127.	Eumycotic mycetoma	Human	佛教慈濟綜合醫院	
138	1.Aspergillus spp. encephalitis and myocarditis 2.Demyelinating canine distemper encephalitis	Dog	國立臺灣大學獸醫專業學院	
298	Systemic Candidiasis	Tortoise	中興大學獸醫學院	
322	Allergic fungal sinusitis	Human	羅東博愛醫院	
326	Meningoencephalitis, <i>Aspergillus flavus</i>	Cat	國立臺灣大學獸醫專業學院	
331	Histoplasmosis	Human	花蓮慈濟醫院病理科	
332	Pulmonary Blastomycosis	Rat	中興大學獸醫學院	
寄生蟲	14.	Dirofilariasis	Dog	台灣省家畜衛生試驗所
	15.	Pulmonary dirofilariasis	Human	台北榮民總醫院
	20.	Sparganosis	Human	台北榮民總醫院
	46.	Feline dirofilariasis	Cat	美國紐約動物醫學中心
	49.	Echinococcosis	Human	台北榮民總醫院
	60.	Intestinal capillariasis	Human	台北馬偕醫院
	64.	1.Adenocarcinoma of sigmoid colon 2.Old schistosomiasis of rectum	Human	省立新竹醫院
	66.	Echinococcosis	Chapman's zebra	國立臺灣大學獸醫專業學院
	67.	Hepatic ascariasis and cholelithiasis	Human	彰化基督教醫院
	106.	Parasitic meningoencephalitis, caused by Toxocara canis larvae migration	Dog	臺灣養豬科學研究所
	139	Disseminated strongyloidiasis	Human	佛教慈濟綜合醫院
	141	Eosinophilic meningitis caused by Angiostrongylus cantonensis	Human	台北榮民總醫院病理檢驗部
	156	Parastrongylus cantonensis infection	Formosan gem-faced civet	中興大學獸醫學院
157	Capillaria hepatica, Angiostrongylus cantonensis	Norway Rat	行政院農業委員會農業藥物毒物試驗所	

	202	Colnorchiasis	Human	高雄醫學院附設醫院
	203	Trichuriasis	Human	彰化基督教醫院
	204	Psoroptes cuniculi infection (Ear mite)	Rabbit	農業藥物毒物試驗所
	205	Pulmonary dirofilariasis	Human	和信治癌中心醫院
	206	Capillaries philippinesis	Human	和信治癌中心醫院
	207	Adenocarcinoma with schistosomiasis	Human	佛教慈濟綜合醫院
	286	Etiology- consistent with <i>Spironucleus (Hexamita) muris</i>	Rat	國家實驗動物中心
	327	Dermatitis, mange infestation	Serow	中興大學獸醫學院
	328	<i>Trichosomoides crassicauda</i> , urinary bladder	Rat	國家實驗動物中心
原蟲	4.	Cryptosporidiosis	Goat	台灣養豬科學研究所
	15.	Amoebiasis	Lemur fulvus	台灣養豬科學研究所
	16.	Toxoplasmosis	Squirrel	台灣養豬科學研究所
	17.	Toxoplasmosis	Pig	屏東技術學院獸醫學系
	51.	Pneumocystis carinii pneumonia	Human	台北病理中心
	57.	Cecal coccidiosis	Chicken	中興大學獸醫學系
	65.	Cryptosporidiosis	Carprine	台灣養豬科學研究所
	211	Avian malaria, African black-footed penguin	Avian	臺灣動物科技研究所
	242	Neosporosis	Cow	國立屏東科技大學獸醫學系
	263	Intestinal amebiasis	Human	彰化基督教醫院病理科
	320	Cutaneous leishmaniasis	Human	佛教慈濟綜合醫院
立克次體	229	Necrotizing inflammation due to scrub typhus	Human	佛教慈濟綜合醫院
	251	Scrub typhus with diffuse alveolar damage in bilateral lungs.	Human	佛教慈濟綜合醫院
皮膚	216	Cytophagic histiocytic panniculitis with terminal hemophagocytic syndrome	Human	佛教慈濟綜合醫院
其它	9.	Perinephric pseudocyst	Cat	國立臺灣大學獸醫專業學院
	10.	Choledochocyst	Human	長庚紀念醫院
	11.	Bile duct ligation	Rat	中興大學獸醫學系
	37.	Myositis ossificans	Human	台北醫學院

75.	Acute yellow phosphorus intoxication	Rabbits	中興大學獸醫學系
76.	Polycystic kidney bilateral and renal failure	Cat	美國紐約動物醫學中心
151	Osteodystrophia fibrosa	Goat	台灣養豬科學研究所 G台東縣家畜疾病防治所
80.	1.Glomerular sclerosis and hyalinosis, segmental, focal, chronic, moderate 2.Benign hypertension	SHR rat	國防醫學院 G 國家實驗動物繁殖及研究中心
83.	Phagolysosome-overload nephropathy	SD rats	實驗動物繁殖及研究中心
85.	Renal amyloidosis	Dog	台灣養豬科學研究所
89.	1.Severe visceral gout due to kidney damaged 2.Infectious serositis	Goose	中興大學獸醫學系
91.	Hypervitaminosis D	Orange-rumped agoutis	國立臺灣大學獸醫專業學院
118.	Cystic endometrial hyperplasia	Dog	臺灣養豬科學研究所
121.	Cystic subsurface epithelial structure (SES)	Dog	國科會實驗動物中心
124.	Superficial necrolytic dermatitis	Dog	美國紐約動物醫學中心
125.	Solitary congenital self-healing histiocytosis	Human	羅東博愛醫院病理科
126.	Alopecia areata	Mouse	實驗動物繁殖及研究中心
142	Avian encephalomalacia (Vitamin E deficiency)	Chicken	國立屏東科技大學獸醫學系
159	Hypertrophic cardiomyopathy	Pig	國立臺灣大學獸醫專業學院
165	Chinese herb nephropathy	Human	三軍總醫院病理部及腎臟科
167	Acute pancreatitis with rhabdomyolysis	Human	佛教慈濟綜合醫院
171	Malakoplakia	Human	彰化基督教醫院
183	Darier' s disease	Human	高雄醫學大學病理科
191	1. Polyarteritis nodosa 2. Hypertrophic Cardiomyopathy	Feline	國立臺灣大學獸醫專業學院
193	Norepinephrin cardiotoxicity	Cat	台中榮總
196	Cardiomyopathy (Experimental)	Mice	綠色四季
212	Kikuchi disease (histiocytic necrotizing	Lymphadenitis	天主教耕莘醫院

	lymphadenitis)	s	
225	Calcinosis circumscripta, soft tissue of the right thigh, dog	Dog	國立臺灣大學獸醫專業學院
230	Hemochromatosis, liver, bird	Bird	國立臺灣大學獸醫專業學院
234	Congenital hyperplastic goiter	Holstein calves	屏東縣家畜疾病防治所
236	Hepatic lipidosis (fatty liver)	Rats	中興大學獸醫學病理學研究所
237	Arteriovenous malformation (AVM) of cerebrum	Human	天主教耕莘醫院
244	Organophosphate induced delayed neurotoxicity	Hens	中興大學獸醫學病理學研究所
257	Severe lung fibrosis after chemotherapy in a child with Ataxia- Telangiectasia	Human	佛教慈濟綜合醫院
294	Arteriovenous malformation of the left hindlimb	Dog	國立臺灣大學獸醫專業學院
299	Polioencephalomalacia	Caprine	屏東家畜疾病防治所
310	Thyroid Follicular Hyperplasia (hyperplastic goiter)	Porcine	屏東縣家畜疾病防治所
311	Melamine and cyanuric acid contaminated pet food induced nephrotoxicity	Rat	國立中興大學獸醫學院
318	Alfatoxicosis	Canine	國立臺灣大學獸醫專業學院
333	Lordosis, C6 to C11	Penguin	國立臺灣大學獸醫專業學院

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、 其他有關比較病理學術發展之事項。
- 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記後，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。應於七日以前以書面通知，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：一般會員新台幣五百元，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。

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

10617 臺北市大安區羅斯福路四段 1 號

國立臺灣大學獸醫系三館 106 室 蕭世烜秘書長 收

Tel: (02) 33663858

Fax: (02) 23682423

e-mail address: shsiao1@ntu.edu.tw

-----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：一般會員新台幣一仟元，學生會員一百元，贊助會員伍仟元，於入會時繳納。
 - (二) 常年會費：一般會員新台幣伍佰元，學生會員一百元。
- 【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、請填妥入會申請表郵寄或傳真方式寄回中華民國比較病理學會秘書處收。

地址：10617 臺北市大安區羅斯福路四段 1 號 國立臺灣大學獸醫系三館 106 室
蕭世烜秘書長 收
電話：02-33663858、傳真 02-23682423。

中華民國比較病理學會入會申請及會員卡

會籍電腦編號：

姓名	中文		性別 <input type="checkbox"/> 男 <input type="checkbox"/> 女	出生日期	民國 年 月 日	出生地	省 縣/市	
	英文			身份字號				
		會員身份： <input type="checkbox"/> 一般； <input type="checkbox"/> 學生； <input type="checkbox"/> 贊助						
學歷	1.			稱謂： <input type="checkbox"/> 醫師； <input type="checkbox"/> 獸醫師； <input type="checkbox"/> 先生； <input type="checkbox"/> 小姐； <input type="checkbox"/> 教授； <input type="checkbox"/> 主任； <input type="checkbox"/> 研究員； <input type="checkbox"/>				
	2.			研究興趣	1.			
	3.				2.			
	4.				3.			
主要經歷	機關名稱			職稱		起	止	
						年 月	年 月	
						年 月	年 月	
						年 月	年 月	
現職						年 月	年 月	
地址	通訊：							
	戶籍：							
	Email：				電話：			
茲贊同 貴會宗旨妳加入為會員嗣後並願遵守一切規章共圖發展 此致 中華民國比較病理學會							審核結果	
申請人： 介紹人： 介紹人：							簽章 簽章 簽章	
中華民國 年 月 日								

國立臺灣大學 校總區地圖



校園出入口

獸醫三館

