

**Chinese Society of Comparative Pathology**

**中華民國比較病理學會**

**第 72 次比較病理學研討會**

**神經及內分泌系統疾病 (Diseases of the Nervous and Endocrine Systems)**



**主辦單位**

**Chinese Society of Comparative Pathology**

**中華民國比較病理學會**

**衛生福利部台中醫院**

**April. 15, 2018 (中華民國 107 年 4 月 15 日)**

**SCHEDULE**  
**72<sup>th</sup> MEETING OF COMPARATIVE PATHOLOGY**  
 中華民國比較病理學會 第 72 次比較病理學研討會  
 神經與內分泌專題

時間：107 年 4 月 15 日(星期日)  
 地點：衛生福利部台中醫院醫療大樓 12 樓大禮堂  
 地址：403 台中市西區三民路一段一九九號  
 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/ 賴銘淙 主任		
09:30~10:30	專題演講	專題演講者： <b>Wei-Hsiang Huang (黃威翔)</b> , DVM, PhD 題目：動物法醫病理學的過去、現在及未來 Forensic Veterinary Pathology: Past, Present and Future *Institute of Forensic Medicine, Ministry of Justice (法務部法醫研究所)	賴銘淙 主任
10:30~11:00	Coffee Break (拍團體照)		
11:00~11:25	Case 497	<b>Li, Wen-Ta (李文達)</b> , DVM, MS <sup>1</sup> ; Tu, Yang-chang (涂央昌), DVM, MS <sup>2</sup> ; Chang, Hui-Wen (張惠雯), DVM, PhD; Jeng, Chian-Ren (鄭謙仁), DVM, PhD; Pang, Victor, Fei (龐飛), DVM, PhD; Wang, Fun-In (王汎熒), DVM, PhD; Liu, Chen-Hsuan (劉振軒), DVM, PhD <sup>1</sup> 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) <sup>2</sup> Epidemiology Division, Animal Health Research Institute, Council of Agriculture, Executive Yuan (行政院農業委員會家畜衛生試驗所疫學研究組)	張惠雯 秘書長
11:25~11:50	Case 498	<b>Lian, Sy-Harn (連思涵)</b> , Hsu, Yung-Hsiang (許永祥), M.D. Department of Pathology, Buddhist Tzu-Chi General Hospital and University (佛教慈濟綜合醫院暨慈濟大學病理科)	張惠雯 秘書長
11:50~13:10	Lunch (第一及第二會議室) Board Meeting (理監事會議 國際會議廳)		
13:10~13:35	Case 499	<b>Chang, Jun-Liang (張俊梁)</b> , 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)	鄭明芳 理事
13:35~14:00	Case 500	<b>Zhi-Yi Lin (林芝儀)</b> , DVM <sup>1</sup> ; Ji-Hang Yin (殷際航), DVM, MS <sup>2</sup> ; Cheng-Hsin Haung (黃正昕), DVM <sup>3</sup> ; Jiunn-Wang Liao (廖俊旺), DVM, Ph.D <sup>2,4</sup> ; Hue-Ying Chiou (邱慧英), DVM, Ph.D <sup>4</sup> .	鄭明芳 理事

		<sup>1</sup> Department of Veterinary Medicine, National Chung Hsing University (國立中興大學獸醫系) <sup>2</sup> Animal Disease Diagnostic Center, National Chung Hsing University (國立中興大學動物疾病診斷中心) <sup>3</sup> National Chung Hsing University Veterinary Medicine Teaching Hospital (國立中興大學獸醫教學醫院) <sup>4</sup> 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)	
14:00~14:25	Case 501	<u>蘇雪妍</u> , 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)	楊俊宏 監事
14:25~15:00	Coffee Break		
15:00~15:25	Case 502	<u>Hsieh, Yu-Han (謝宇涵)</u> , DVM <sup>1</sup> ; Li, Wen-Ta (李文達), DVM, MS <sup>1</sup> ; Hsu, Yung-Hsiang (許永祥), MD, MS <sup>2</sup> ; Chang, Hui-Wen (張惠雯), DVM, PhD <sup>1</sup> ; Jeng, Chian-Ren (鄭謙仁), DVM, PhD <sup>1</sup> ; Pang, Victor Fei (龐飛), DVM, PhD <sup>1</sup> ; Wang, Fun-In (王汎熒), DVM, PhD <sup>1</sup> ; Liu, Chen-Hsuan (劉振軒), DVM, PhD <sup>1</sup> <sup>1</sup> Graduate Institute of Molecular and Comparative Pathobiology, School of Veterinary Medicine, National Taiwan University (國立臺灣大學獸醫專業學院分子暨比較病理生物學研究所) <sup>2</sup> Department of Pathology, Tzu Chi University and Buddhist Tzu Chi General Hospital (慈濟大學醫學院病理學科及佛教慈濟綜合醫院病理科)	楊俊宏 監事
15:25~15:50	Case 503	<u>Ming-Tsung Lai (賴銘淙)</u> , M.D. PhD. Department of Pathology, Taichung Hospital, Ministry of Health and Welfare Taiwan (R.O.C) (衛生福利部臺中醫院病理科)	劉振軒 常 務理事
16:00~16:50	General Discussion (綜合討論) 許永祥 理事長/劉振軒 常務理事		

## 地圖

<http://www.taic.mohw.gov.tw/?aid=101&iid=5>

# 衛生福利部臺中醫院停車暨交通資訊

### 【醫院停車場資訊】

- 第一停車場：由三民路急診入口進入，51車位內含2身心障礙車位。
- 第二停車場：由民生路進入，111車位內含2身心障礙車位。
- 機車停車場：由三民路進入，322車位內含7身心障礙車位(其中2車位於民權路大廳旁)。
- 民權路入口：免收費之身心障礙1車位、婦女優先1車位、身心障礙計程車臨停區1車位、行動不便者臨停接送區1車位。
- 柳川東路入口：免收費之身心障礙3車位。

### 【身心障礙乘車資訊】

- 臺中市小型復康巴士  
網路預約網址：<http://www.tc-pdbus.url.tw/>
- 臺中市無障礙計程車  
叫車電話：(04)4499-178或0800055178
- 經營之車隊：大都衛術星車隊股份有限公司中部分公司
- 收費方式：與臺中市一般計程車計費方式相同。

### 【公車】

- 臺中醫院站(民權路)：沿民權路進入本院  
臺中客運：11、27、101、290、323、324、325  
豐原客運：11  
全航客運：11  
中臺灣客運：25、37、125  
仁友客運：30、32、45  
豐榮客運：40
- 臺中科大民生校區站(三民路)：沿三民路進入本院  
中臺灣客運：1  
仁友客運：21  
臺中客運：26  
彰化客運：99、6933、6935  
全航客運：158



衛生福利部臺中醫院停車場位置圖



衛生福利部臺中醫院地理位置圖

### 國道：

- 國道1號高速公號：臺中交流道→往臺中市區方向→由臺灣大道直行→右轉三民路一段。
- 國道3號高速公號：龍井交流道→臺中市區方向→由臺灣大道直行→右轉三民路一段。

### 【高鐵】高鐵台中站

- 公車：14月台搭乘158號公車：臺中科大民生校區站下車沿三民路步行進入本院約1分鐘。

### 【火車】

- 臺中火車站  
公車：27路、323路、324路於臺中醫院站下車後進入本院。  
步行：沿臺灣大道至三民路左轉，約15分鐘。

### 【飛機】臺中航空站

- 公車：  
搭乘9號公車：美榮藥局站下車，沿三民路步行進入本院約3分鐘。  
搭乘302號公車：臺灣大道仁愛醫院站下車，沿柳川東路步行至民權路左轉進入本院約8分鐘。

醫療大樓12樓  
大禮堂

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## Special Lecture

(專題演講)

題目：動物法醫病理學的過去、現在及未來

### Forensic Veterinary Pathology: Past, Present and Future

Wei-Hsiang Huang (黃威翔), DVM, PhD

Institute of Forensic Medicine, Ministry of Justice (法務部法醫研究所)

#### Abstract

The last two decades have seen growing importance on veterinary forensics all over the world. In Taiwan, several notorious crimes against animals have drawn public attention in recent years, and these cases underscore the importance of developing the veterinary forensics.

Forensic veterinary medicine/science is defined as the application of veterinary medicine/science for legal purposes, and veterinary pathologists play a crucial role in animal death investigation. Animal medical examiners, like the counterpart in medical forensic pathology, look for lesions or trace evidence on carcasses not only to determine the cause of death and the manner of death but also to answer specific questions raised by the authorities. The manner of death is a way to categorize death for legal purposes, and it should be determined on the basis of the circumstances under which the cause of death occurred.

Since 2011, the School of Veterinary Medicine, National Taiwan University have been commissioned by Animal Protection Offices to perform forensic necropsy for alleged animal abuse cases. Additionally, using data collected from a web-based veterinary-confirmed reporting system for mortality of domesticated dogs and cats were established during 2012-2014, trauma-related deaths were investigated. Our results suggest that there may be animal abuse may be animal cruelty cases overlooked in our society.

This talk will include several parts: First, introduction of the basic concepts of forensic pathology. Second, discussion of the differences and similarities between the academic and forensic necropsy and between veterinary and medical forensic pathology. Third, elaboration of the manner of death in forensic veterinary pathology using 100 forensic cases collected between 2011 and 2016. Finally, the current status and future prospects of forensic veterinary pathology will be illustrated.

MEETING OF COMPARATIVE PATHOLOGY  
 April 15, 2018  
 中華民國比較病理學會第 72 次比較病理學研討會  
 CASE DIAGNOSIS  
 72cp slide website  
 1070415

Case No.	Presenter	Slide No.	Diagnosis
Case 497	李文達	NTU2015-3025	Combined central and peripheral demyelination (CCPD) <a href="http://www.ivp.nchu.edu.tw/slide_view.php?id=1444">http://www.ivp.nchu.edu.tw/slide_view.php?id=1444</a>
Case 498	連思涵	159A	Inflammatory demyelinating pseudotumour <a href="http://www.ivp.nchu.edu.tw/slide_view.php?id=1441">http://www.ivp.nchu.edu.tw/slide_view.php?id=1441</a>
Case 499	張俊梁	171696	Brain, frontal lobe, Lt., Malignant melanoma, consistent with metastatic cutaneous malignant melanoma. <a href="http://www.ivp.nchu.edu.tw/slide_view.php?id=1402">http://www.ivp.nchu.edu.tw/slide_view.php?id=1402</a>
Case 500	林芝儀	CO17-330	Ischemic stroke in a dog <a href="http://www.ivp.nchu.edu.tw/slide_view.php?id=1449">http://www.ivp.nchu.edu.tw/slide_view.php?id=1449</a>
Case 501	蘇雪妍	436613	Anaplastic carcinoma thyroid (spindle cell type) <a href="http://www.ivp.nchu.edu.tw/slide_view.php?id=1446">http://www.ivp.nchu.edu.tw/slide_view.php?id=1446</a>
Case 502	謝宇涵	NTU2017-2268	Primitive neuroectodermal tumor (PNET), most likely originating from ureter, with metastasis to liver and involvements of urinary bladder, uterus and left adrenal gland <a href="http://www.ivp.nchu.edu.tw/slide_view.php?id=1445">http://www.ivp.nchu.edu.tw/slide_view.php?id=1445</a>
Case 503	賴銘淙	E216_1140A	Metastatic follicular carcinoma <a href="http://www.ivp.nchu.edu.tw/slide_view.php?id=1451">http://www.ivp.nchu.edu.tw/slide_view.php?id=1451</a>

**Case number: 497**

**Slide no.: NTU 2015-3025**

**Slide view:**

[http://www.ivp.nchu.edu.tw/slide\\_view.php?id=1444](http://www.ivp.nchu.edu.tw/slide_view.php?id=1444)

[http://www.ivp.nchu.edu.tw/slide\\_view.php?id=1443](http://www.ivp.nchu.edu.tw/slide_view.php?id=1443)

[http://www.ivp.nchu.edu.tw/slide\\_view.php?id=1442](http://www.ivp.nchu.edu.tw/slide_view.php?id=1442)

Li, Wen-Ta (李文達), DVM, MS<sup>1</sup>; Tu, Yang-chang (涂央昌), DVM, MS<sup>2</sup>; Chang, Hui-Wen (張惠雯), DVM, PhD; Jeng, Chian-Ren (鄭謙仁), DVM, PhD; Pang, Victor, Fei (龐飛), DVM, PhD; Wang, Fun-In (王汎熒), DVM, PhD; Liu, Chen-Hsuan (劉振軒), DVM, PhD

<sup>1</sup>Graduate Institute of Molecular and Comparative Pathobiology, School of Veterinary Medicine, National Taiwan University (國立臺灣大學獸醫專業學院分子暨比較病理生物學研究所);

<sup>2</sup>Epidemiology Division, Animal Health Research Institute, Council of Agriculture, Executive Yuan (行政院農業委員會家畜衛生試驗所疫學研究組)

## **CASE HISTORY**

### **Signalment & History:**

A one year-old male Maltese showed mild ataxia, paraparesis and disorientated for 4 months. The clinical signs gradually progressed to non-ambulatory tetraparesis, and voice change and difficulties in swallow were noted. Decreased muscle tone and reflex in both forelimbs and hindlimbs were found under neurologic examination. The patient died suddenly, and necropsy was performed.

### **Gross Findings:**

No remarkable findings were noted during necropsy.

## **CASE RESULT**

### **Histopathologic Findings:**

1. Central nervous system: In the white matter of cerebrum, cerebellum, and spinal cord, there are multifocal losses of neurofibrillary architectures with replacement by increased numbers of fibrillary/gemistocytic astrocytes and mononuclear inflammatory cells (mainly lymphocytes with scattered gitter cells), and the presence of swollen/hypereosinophilic axons, suggestive of axonal degeneration, demyelination and astrogilosis. Multifocally, varying numbers of lymphocytes and macrophages is noted in the perivascular space, suggestive of perivascular cuffing. The perivascular cuffing is also found in the white matter of spinal cord. The architectures of ventral and dorsal nerve roots of spinal cord are disrupted by lymphocytic infiltration with scattered macrophages.
2. Peripheral nerves: The architectures of sciatic nerves and other peripheral nerves are disrupted by lymphoplasmacytic infiltration with small number of macrophages and the presence of digestion chambers.

### **Morphological Diagnosis:**

1. Leukoencephalomyelitis, multifocal, moderate to severe, chronic, with axonal degeneration, demyelination, and astrogilosis, cerebrum, cerebellum, and spinal cord.
2. Polyneuritis, with axonal degeneration and demyelination, peripheral nerves and spinal nerve roots.

### **Differential Diagnosis:**

The major differential diagnoses are listed in Table 1. Due to the presence of the combined central and peripheral demyelination, the possibilities of uncommon/atypical infectious agents, including Dengue virus, Japanese encephalitis virus, and Zika virus, should be ruled out.



Table 1. Differential diagnoses of canine leukoencephalomyelitis and polyradiculoneuritis

Etiology	Locations	Meninges	CNS		PNS	
			Grey matter	White matter	Ganglion	Nerve fiber
Canine distemper (CD)		O	O	O	X	X
Herpesvirus infection (Pseudorabies)		O	O	O/X	O	X
Rabies		O	O	O/X	X	X
Toxoplasmosis		O	O	O	O/X	O
Neosporosis		O	O	O	O/X	O
Leishmaniasis		O	O	O	O/X	X
Encephalitozoonosis		O	O	O	X	X
Granulomatous meningoencephalomyelitis (GME)		O	O/X	O	X	X
Necrotizing meningoencephalitis (NME)		O	O	O/X	X	X
Necrotizing encephalitis (NE)		X	O/X	O	X	X
Acute polyneuritis		X	X	X	X	O
The present case		X	X	O	X	O

\* O: lesions can be found; O/X: lesions may or may not be found; X: lesions are not found.

### Laboratory Examination:

#### 1. Histochemical stainings:

Giemsa, Periodic acid–Schiff (PAS) and Brown and Brenn (B&B) stainings for detecting the organisms of *Leishmania* spp., *Toxoplasma gondii*, *Neospora caninum*, and *Encephalitozoon cuniculi* were performed, and all results were negative.

#### 2. Immunohistochemical (IHC) stainings:

The deparaffinized tissue sections were heated in retrieval solution (Trilogy, Cell Marque, Rocklin, CA) at 121°C in autoclave for 15 min (for IHC of CDV) or treated with 100 µg/ml of proteinase K (Roche, Mannheim, Germany) in 0.6 mol/L of Tris (pH 7.5)/0.1% CaCl<sub>2</sub> for 15 min (for IHC of rabies virus). Subsequently, tissue sections were incubated in 2.5% normal goat serum in Tris-buffered saline (TBS) solution for 30 min at room temperature, and then incubated with antibodies against CDV (diluted 1:500; clone DV2-12; Santa Cruz Biotechnology, Dallas, TX, USA) and rabies virus (diluted 1:3000; anti-neucleoprotein polyclone rabies antibody, kindly supported by Dr. Satoshi Inoue, National Institute of Infectious Disease, Japan) at room temperature for 1 hour. The sections were then treated with 3% hydrogen peroxide followed by peroxidase-conjugated secondary antibodies for 60 min at room temperature. After exposure to 2% diaminobenzidine for 3 min, the slides were counterstained with hematoxylin for 30 sec. IHC stainings for CD3 (diluted 1:400; clone F7.2.38; Dako, Glostrup, Denmark), CD79a (diluted 1:200; clone HM57; Abgent, San Diego, CA, USA), and CD18 (diluted 1:400; clone CA16.3C10; School of Veterinary Medicine, University of California, Davis, CA) were performed in an automated system (BondMax, Leica Microsystems Inc., Bannockburn, IL, USA). IHC stainings of CDV and rabies virus were all negative. IHC stainings of CD3 and CD79a showed that the majority of lymphocytes were CD3 positive, suggestive of T lymphocytes. Scattered CD79a positive lymphocytes were found in the perivascular regions. Scattered CD18 positive macrophages were noted throughout the lesions.

#### 3. Molecular diagnosis:

DNA and RNA were extracted from the formalin-fixed, paraffin-embedded tissue blocks by AllPrep DNA/RNA FFPE kit, (Qiagen, CA, USA). Polymerase chain reaction (PCR) and reverse transcription PCR (RT-PCR) using primer sets targeting Dengue virus, Zika virus, Japanese encephalitis virus, rabies virus, CDV, PRV, *T. gondii*, *N. caninum*, *Leishmania* spp., and *E. cuniculi* were performed, but all results were negative.

### Final Diagnosis:

Combined central and peripheral demyelination (CCPD), most likely autoimmune response against the myelin protein with/without a previous viral infection.

#### **Discussion:**

The clinical signs and cause of death in the present case are associated with the leukoencephalomyelitis and polyneuritis. The differential diagnoses include 1) infectious diseases, such as canine distemper, pseudorabies, rabies, protozoal diseases, including *T. gondii*, *N. caninum*, *Leishmania* spp., and *E. cuniculi*; 2) non-infectious diseases, such as granulomatous meningoencephalitis (GME), necrotizing meningoencephalitis (NME), necrotizing encephalitis (NE), and acute polyneuritis; and 3) autoimmune response against the myelin protein with/without a previous viral infection. The infectious diseases are ruled out by routine histopathological examination, histochemical/IHC stainings, and PCR/RT-PCR.

The patient with GME usually has disseminated angiocentric lesions in the cerebellar white matter and meninges, and the NME generally shows lesions in the meninges, cerebral cortex, and subcortical white matter. Both lesion distributions are different with our case, and GME and NME are therefore ruled out. The lesions of NE are characteristically found in the white matter, but peripheral nervous system (PNS) is generally not affected. On the other hand, the acute polyneuritis is an autoimmune disease of the PNS but central nervous system is usually intact. The lesion distributions of NE and acute polyneuritis are partially consistent with our case. The concurrent NE and acute polyneuritis cannot be completely ruled out in this case, but this possibility is relatively low due to the characteristics of both diseases (species specific for NE and bitten by raccoons in acute polyneuritis). Considering the lesion distribution and type of inflammation, the most likely diagnosis is autoimmune response against the myelin protein with/without a previous viral infection. The autoimmune demyelinating lesions may be associated with a previous viral infection and are usually limited either to the CNS or to the PNS, such as acute/chronic disseminated encephalomyelitis (autoimmune demyelinating diseases mainly affecting CNS) and acute/chronic inflammatory demyelinating polyneuropathy (autoimmune processes affecting PNS and characterized by progressive areflexic weakness). The combined central and peripheral demyelination (CCPD) is rare and has only been reported in humans.

Antibodies directly against neurofascin (NF)-155 and NF-186, proteins expressed in the myelin of both CNS and PNS have been identified with higher frequency in Japanese patients with CCPD, and thus the NF155- and NF186-specific T cell response is considered to be an important pathogenesis of developing CCPD in humans. On the other hand, ADEM is an inflammatory demyelinating disorder of the CNS, and ADEM with peripheral involvement has also been previously reported in humans. ADEM is a disease predominantly found in children and infants. It is speculated that ADEM can be a T cell mediated autoimmune response to myelin, triggered by an infection or vaccination (post-infectious and post-vaccinal forms). Both forms are clinically and pathologically similar. However, the underlying mechanism of autoimmune associated demyelinating disorder in both CNS and PNS is still undetermined.

In the present case, the vaccination record of the patient is unknown (according to the information from the owner), and thus it is difficult to correlate the relationship between vaccination and CCPD in the present case. Furthermore, the commercial vaccination is widely applied in many canine species for many years, and thus the possibility of post-vaccinal forms is relative low. Post-infectious CCPD is associated with an antecedent or concomitant infection, especially viral infection. Previous viral infection may serve as the initiator, but subsequent lesion promotion and progression can vary and are not necessarily associated with the viral infection. It is also likely that the virus may be eliminated by the host responses and thus become undetectable intralésionally. In addition, the present animal is from a breeding facility, and this phenomenon also increased the possibility of previous viral infection. Therefore, although no specific infectious agents were identified in the present case, CCPD due to autoimmune response against the myelin protein with/without a previous viral infection is the most likely diagnosis in the present case. This is also the first case report of CCPD in dogs.

**References:**

1. Aktas O. Shifting borders, crossing boundaries: The case of combined central and peripheral demyelination. *Mult Scler* 1352458517726386, 2017.
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## Comparative Pathology

Case No: 498

Slide no.: 159A

Slide view:

[http://www.ivp.nchu.edu.tw/slide\\_view.php?id=1441](http://www.ivp.nchu.edu.tw/slide_view.php?id=1441)

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### CASE HISTORY

**Signalment:** 5-year-old boy

**Clinical History:**

He is a 5-year-old boy, G2P2, gestational age 38weeks, birth weight: 3100gw, lived in China, presented with headache and left hand weakness for one month.

He was healthy and energetic until one month ago, when he started to experience headache, accompanying with left hand weakness, tremor, and he became sleepy within recently days. There was no sensory change nor numbness. No trauma history was noted. He was brought to Hualien Tzu Chi hospital for help.

At neurosurgeon Dr. Chou's out-patient department, flexion of left hand was noted. The laboratory data, including complete blood count and differential count, coagulation function, biochemistry, all within normal range. The magnetic resonance imaging(MRI) showed mild passive dilatation of right lateral ventricle, focal area of brain tissue loss over right putamen and insular cortex.

Having the diagnosis of brain tumor, suspected inflammation disease or glioma group, the patient was admitted to NS ward for evaluation and brain biopsy.

**Gross Findings:**

The biopsy of the cerebrum of frontal lobe(craniotomy) consists of 6 tissue fragments measuring up to 1.0 x 0.2 x 0.2 cm in size, fixed in formalin. Grossly, they are grayish and elastic.

**CASE RESULT**

- Microscopically, it has well defined borders perivascular lymphocytes infiltration and numerous foamy histiocytes infiltration. Luxol blue shows demyelination without coagulation necrosis. It is consistent with inflammatory demyelinating pseudotumor.
- The CSF showed few atypical cells with some in 1.&2.

Stains	Results
Gram's	(-)
PAS	(-)
Iron	(+), consistent with hemorrhage
Luxol fast blue	Demyelination
IHC	GFAP(+) in normal gliocytes Ki67 (2%)

with

fast

PMNs

**Differential Diagnosis:**

Glial neoplasm  
Chronic abscess

**Diagnosis:**

Inflammatory demyelinating pseudotumour

**Discussion:**

Tumefactive demyelinating (TDL) lesions, also called “demyelinating pseudotumor”, are focal zones of demyelination in the central nervous system(CNS).<sup>[1]</sup> Mimic the neuroimaging features of intraxial glial neoplasm or chronic abscess, the precise diagnosis of inflammatory demyelinating pseudotumor is absolutely essential as the management of TDL and gliomas are different.

<b>Clinical features</b>	<ul style="list-style-type: none"> <li>● Most common: Acute weakness of limbs.</li> <li>● One study involved six patients:<sup>[3]</sup> <ul style="list-style-type: none"> <li>✓ 4/6 male, median age 45 year-old(youngest 12 year-old)</li> <li>✓ Rare presentation: diplopia, hemianopia</li> <li>✓ Predisposing factor: 1/6 fever, other unremarkable</li> <li>✓ Vasculitis workup: all negative</li> </ul> </li> </ul>
<b>Neuroimage</b>	<ul style="list-style-type: none"> <li>● Enhancement pattern: peripheral, incomplete, and often poorly defined or 'wispy'.</li> <li>● Supratentorial region, single or multiple sites. Cystic component. Perifocal edema and mass effect. Ring enhancement on contrast. <ul style="list-style-type: none"> <li>✓ T1W: hypointense. T2W: hyperintense. FLAIR: hypointense</li> <li>✓ rCBV(relative cerebral blood volume): hypoperfusion</li> </ul> </li> <li>● Also in spinal cord.</li> </ul>
<b>Pathological features</b>	<ul style="list-style-type: none"> <li>● Well defined borders</li> <li>● Uniform distribution of foamy macrophages</li> <li>● No coagulative necrosis</li> <li>● Sheets of gemistocytic astrocytes with well formed processes</li> <li>● Perivascular chronic inflammatory cell infiltration</li> <li>● Absence of myelin with preservation of axons</li> </ul>
<b>Treatment</b>	<ul style="list-style-type: none"> <li>● Corticosteroid therapy</li> <li>● Plasma exchange</li> </ul>

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**Case Number: 499**

**Slide Number: 171696**

**Slide View:**

[http://www.ivp.nchu.edu.tw/slide\\_view.php?id=1402](http://www.ivp.nchu.edu.tw/slide_view.php?id=1402)

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## **CASE HISTORY:**

**Signalment:** A 85-year-old male

### **Clinical history:**

A 85-year-old male visited at our hospital due to headache with sudden onset of seizure attack with loss of consciousness for two days.

Patient had episodes of headache over left frontal region, and loss 7-8 kg of body weight was noticed in recent months.

In this admission morning, he had suffered headache, nausea, vomiting with sudden onset of seizure attack with loss of consciousness developed. And then, he felt exacerbated headache, difficulty walking clumsiness, abnormalities in vision, emotional response memory attention alertness, difficulty with speech was also found. So he was send to our hospital was admitted for further investigation and treatment.

He was Hakkas race and retired and lived with parents. He had the history of hypertension and type 2 diabetes mellitus with regular medication for 2 years. He had got gouty arthritis for two years. He had fracture of right proximal humeral bone after ORIF operation (December, 2005). No history of drug allergy, smoke habit or foreign travelling history, except social drinking. His family history was non-contributory.

In admission, physical examination, vital sign was 36.8°C, PR was 88/min, RR was 17/min, BP was 122/79 mmHg, body height was 155cm and body weight was 56Kg. General appearance showed alertness with ill-looking. There also presented mole or birthmark on back (different shades of brown or black, red; the spot is larger than 6 millimeters). HEENT conditions were pale conjunctiva, no icteric sclera, and no lymph node enlargement. Heart was regular heart beats, no murmur. Chest showed symmetric chest wall expansion, clear breath sound, no rhonchi, no wheezing or basal rales. Abdomen was soft and ovoid, normal bowel sound, no shifting dullness, no local tenderness. Back and spine showed no spine deformity, no costovertebral angle knocking pain. Extremities showed no pitting edema, no peripheral cyanosis. A previous excision poorly healing wound over the medial aspect of the right big toe.

Neurological examination showed no remarkable findings, GCS: E4V4M6, cranial nerves were intact. MP=5/5, DTR= ++/++, with essential normal sensory system. Bilateral Babinski's sign was absent. Digital rectal examination was no significant finding with grade II prostate, non-tenderness or nodularity was found. No axillary, neck or inguinal regional lymphadenopathy was found. Others were non-contributions.

### **Laboratory results (Clinical Pathology) and Imaging study:**

The laboratory data included the CBC, Hb was 11.8 gm/dL (14.0-18.0 gm/dL), WBC was 13080 /uL (4500-11000/uL), PTT was 24.8 sec. The stool, urine analysis, and biochemistry results showed glucose was 204mg/dL, CPK was 262U/L, CRP was 1.3 mg/dL, lactic acid was 5mmol/L. The serum tumor biomarkers included CA199 was 64 (<34U/mL), CA125 was 54 (< 32U/mL). AFP, CEA, PSA, and beta-HCG displayed within normal limits. The chest-X-ray showed thoracic aorta with calcifications and cardiomegaly, interstitial change of both lung fields. The plate internal fixation of

right humerus was also noted. The KUB showed no significant finding. The CT scan of chest showed pleural thickening, fibrosis and multiple parenchyma nodular, opacities with internal calcifications. Some enlarged lymph nodes maximal size 1.9 cm over the paratracheal, subcarinal, and aorto-pulmonary window spaces was noted. The CT scan of brain revealed a high density lesion size 2.0 cm in the left frontal with extensive perilesional edema, brain tumor is highly suspected, and probably associated with intra-tumoral bleeding was noticed. The brain MRI showed hyper-signal- intensity on T1WI, and hypo-signal-intensity on T2WI with internal hyper-signal-intensity areas, and blooming dark signal on SWI, and vivid heterogeneous enhancement, cavernoma and hemorrhagic brain metastasis was firstly considered. Consequently he underwent the left fronto-parietal craniotomy with removal of brain tumor was performed.

### **Gross Findings:**

The specimen submitted consists of one small piece of brain soft tissue fragment with tan-brown to coal-black in color with soft in consistency, measuring 2 by 1.5 by 0.5 cm. Total excised specimen submitted was embedded for section.

### **CASE RESULT:**

#### **Histopathologic Findings:**

Microscopically, histological examination of the submitted brain tissue fragment excised composed of massive infiltrative proliferative malignant melanoma cells. These malignant melanoma cells display spindle to ovoid of bizarre, large, multinucleated giant epithelioid, large or giant nuclei with nucleoli, occasional mitoses, and abundant cytoplasm with prominent dusty tan and pigment granules in melanophagocytosis. Variable in size of melanoma cells forming trabeculae, cellular nests or clusters of nevus and infiltrative growing patterns in the interspersed brain parenchyma peripherally.

Back tracking the patient's past medical history, according to the patient's family statement that the patient had suffered from the malignant melanoma of the right big toe and had received excision at the regional hospital for two years ago. So that pathological examination demonstrated the characteristic features of brain metastatic malignant melanoma, consistent with originating from the malignant melanoma of the right big toe.

#### **Immunohistochemistry:**

These tumor cells showed negative histochemical staining for PAS and mucin. Immunohistochemical (IHC) staining demonstrated strongly diffusely positive immunoreactivity for HMB-45, vimentin, Melan-A, S-100 protein, and weakly positive for pan-CK and NSE. Tumor cells also demonstrated negatively immunostaining for BRAFVE1, GFAP, TTF1, LCA, and CEA.

#### **Differential Diagnoses:**

Differential diagnosis of brain metastatic malignant melanoma includes the following conditions:

1. Primary tumors
  - Primary intracranial malignant melanoma
  - Glial neoplasms
2. Metastatic tumors
  - Carcinomas or sarcomas

**Diagnosis: Brain, frontal lobe, Lt., Malignant melanoma, consistent with metastatic cutaneous malignant melanoma.**

**Follow-up and workup:**

One week after surgery the patient was suffered from aspiration pneumonia complicated with *Klebsiella pneumoniae* infection. Unfortunately, he was persisted with community-acquired pneumonia, and highly suspected lung cancer was impressed. Consequently, episodes of aspiration pneumonia with septic shock developed. He was expired six months later after surgery.

## **Discussion:**

The incidence of melanoma is on the rise and although melanoma currently accounts for only 4% of all skin cancers, it is responsible for 80% of all skin cancer deaths. Melanoma is the third most common systemic cancer that leads to brain metastases. Compared with primary lung, breast, renal or colorectal cancer, melanoma has the highest propensity to metastasize to the brain. The annual incidence of melanoma has increased over time, with brain metastases developing in 40% to 50% of patients with advanced melanoma. Recent data have shown an incidence of brain metastases in less than 50% of patients with metastatic melanoma. Previous autopsy reports indicated that the incidence of brain metastases may be as high as 75% post-mortem, but only 7-10% of patients have brain metastases discovered at initial diagnosis, which indicates that most patients diagnosed with melanoma subsequently developed intracranial metastasis.

Intracranial metastatic melanoma is the third most common brain metastasis. These patients can commonly present with headaches, seizures, mental status alterations, ataxia, nausea and vomiting, and visual disturbances. However, 10% of patients may be asymptomatic. In the eighth edition of the American Joint Committee on Cancer (AJCC) tumor, node, metastasis (TNM) staging system for melanoma, brain metastases are separated from other sites of metastasis and form a separate M category, M1d. Brain metastases, a specific form of Stage IV melanoma, are one of the most common and difficult-to-treat complications of melanoma.

Pathology, melanoma metastases can be artificially divided into "melanotic" (containing greater than 10% melanotic cells on histopathology) or "amelanotic" (containing less than 10% melanotic cells). In 1995, Isiklar et al. published a study in the AJR where only melanotic metastases provided consistent and reliable MR findings (hyperintense on T1 and hypointense on T2). The MR findings of amelanotic metastases were non-specific. Unfortunately, melanotic metastases made up only 25% of the total cerebral melanoma metastases examined. Radiographic features, intratumoural haemorrhage is a much more common feature of melanoma metastases in comparison to other brain metastases.

Melanoma has a wide spectrum of histologic features which mimic epithelial, hematologic, mesenchymal (smooth muscle), and neural tumors. Immunohistochemistry has been the primary tool to distinguish melanomas from these other tumors in diagnosis of difficult cases; it has also been studied for use as an adjunct to distinguish benign and malignant melanocytic tumors and to elucidate prognosis. Useful markers include S100 protein, which is highly sensitive, as well as HMB-45, MART-1/Melan-A, tyrosinase, and MITF, which are generally more specific. Traditionally, melanoma markers such as S100, HMB45, and MART-1 have been used as a panel of antibodies to identify melanoma. Despite the proliferation of immunohistochemical markers, S-100 remains the most sensitive marker for melanocytic lesions, while markers such as HMB-45, MART-1/Melan-A, tyrosinase, and MITF demonstrate relatively good specificity but not as good sensitivity as S-100. Ki-67 remains the most useful adjunct in distinguishing benign from malignant melanocytic tumors. None of the markers reviewed has been shown conclusively to have prognostic value for melanocytic neoplasms. Distinguish melanocytes from non-melanocytes, but not malignant cells from benign cells: S100 shows nuclear and cytoplasmic staining, 90% positive sensitive but not specific (although usually negative in tumors considered in the differential). HMB45 shows cytoplasmic and weak



nuclear staining (Mod Pathol 2008; 21:1121), less sensitive but more specific than S100. In current practice, the most clinically useful stains are melanoma differentiation markers.

In clinical practice the gold standard method to assess *BRAF* status in patients with metastatic melanoma is based on molecular assays. Recently, a mutation-specific monoclonal antibody (VE1), which detects the *BRAF* V600E mutated protein, has been developed. The sensitivity and the specificity of the Ventana® VE1 antibody were 89.2 and 96.2% respectively, while the positive predictive value and negative predictive value were 97.1 and 86.2%, respectively. Melanoma is a challenging malignancy to treat, and with its increasing incidence are the fifth and the seventh most common cancer diagnosed in men and women respectively. About 40–60% of cutaneous melanomas have *BRAF* mutations and 90% of these involve a specific missense substitution of valine by glutamic acid at codon 600 (V600E). This mutation constitutively activates the protein and the downstream MAPK signaling pathway in a RAS-independent manner, promoting proliferation, survival and spreading of tumor cells. Metastatic melanoma patients harboring this hot spot mutation can be effectively treated with *BRAF* inhibitors alone or in combination with MEK inhibitors because this genetic alteration is predictive to therapeutic response. Our findings encourage the introduction of immunohistochemistry as a rapid screening tool for the assessment of *BRAF* status in melanoma patients in routine diagnostic procedures and prepare the ground for other studies to highlight the role of immunohistochemical *BRAF* V600E expression in patients at the time of progression.

Management following surgical resection of melanoma brain metastases, hypofractionated or conventionally fractionated involved-field RT to the resection cavity can be considered to minimize the risk of local recurrence. Therefore, monitoring with periodic neuroimaging but without specific additional treatment may be appropriate in some cases. To management with the multidisciplinary approach, asymptomatic small brain metastases, symptomatic or large brain metastases, leptomeningeal disease, symptom control, and surveillance etc. Neurosurgery should be evaluated the patient selection and management following surgery. Stereotactic radiosurgery (SRS) recommends the efficacy, radiation sensitization, and role of whole brain radiotherapy (WBRT) after SRS.

In addition, the advent of systemic immunotherapies included specifically agents that anti-programmed death-1 (anti-PD-1), and programmed death ligand-1 inhibitors, adoptive cell therapy, targeted agents cytotoxic T-lymphocyte antigen-4, and chemotherapy, has increased the potential therapeutic options available to patients with both systemic and brain disease. Until recently, melanoma brain metastases carried a poor prognosis, with a median overall survival of about 4-5 months.

### **Conclusion:**

Brain metastases, as in other systemic cancers, such as lung or breast, remain a significant complication of melanoma. Metastases to the nervous system remain devastating, but their prognosis and therapies are more heterogeneous than previously appreciated. These systemic therapy approaches need to be integrated into a multidisciplinary management plan. In this setting, the optimal timing and integration of systemic therapy with treatment targeting brain metastases is uncertain. Specific therapy directed against brain metastases needs to consider the number and location of lesions, as well as the overall condition of the patient:

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**Case Number: 500**  
**Slide No.: CO17-330**  
**Slide view:**

**[http://www.ivp.nchu.edu.tw/slide\\_view.php?id=1449](http://www.ivp.nchu.edu.tw/slide_view.php?id=1449)**

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## **CASE HISTORY**

### **Signalment:**

A 14-year-old, intact male mixed dog with a history of tetraparesis and stroke was evaluated at the local animal hospital.

### **Clinical History:**

The dog with incomplete vaccination and ectoparasitic prevention record was referred to the National Chung Hsing University Veterinary Animal Hospital on June 8<sup>th</sup>, 2017 because of tetraparesis noticed by the owner on May 19<sup>th</sup>, 2017, and stroke was diagnosed by local animal hospital. Neurological examination revealed tetraparalysis, increased in muscle tone of his left side, positive crossed extensor of hindlimbs, cutaneous trunci reflex stop at T13-L2. Accordingly, the lesion was located at brainstem and T2-L3. The dog was rechecked on June 26<sup>th</sup>, 2017. Neurological examination revealed decreased conscious perception and spinal reflex. Considering the severity of clinical signs and poor prognosis, euthanasia was performed and was submitted to NCHU Animal Disease Diagnostic Center for pathologic examination on June 26<sup>th</sup>, 2017.

### **Gross Findings:**

On external examination, the left scapular had a 4 × 3 cm pressure sore. Scrotum was swollen, measuring 10 x 9 x 8 cm.

At necropsy, on the left and right atrioventricular valves and chordae tendineae had multiple, firm, smooth, pale tan to red, variable and bulging nodules. On the surface of the lungs contained multiple black pinpoint (Anthracosis). At the edge of the spleen presented multiple, red brown to black, elevating, firm nodules, and a pale tan, soft, circular area measuring approximately 0.5 cm on cut surface (nodular hyperplasia). On the surface of the liver was mottled with multiple, elevating, measuring approximately 0.5-1 cm nodules. Bilaterally, the surface of the kidneys were irregular. The left testis was moderately swollen, soft, measuring 4 × 2 × 5 cm, and a 3 × 3 cm, pale tan, soft, capsulated mass was spotted on the cut surface. A 4 × 3 × 2 cm, yellow to white, soft, capsulated mass attached to the end of colon, which on cut surface was yellow to dark red. The prostate gland was swollen, soft, measuring 4 × 5 × 2 cm, and a yellow to brown area was spotted on the cut surface, there were multiple irregular cysts filled with turbid, brown, approximately 0.5ml fluid. Several cysts were connected to the bladder, measuring 3 × 2 × 1 cm to 8 × 8 × 3 cm, and filled with clear, yellow fluid. No significant fluid backflow was noticed into the bladder when pressing cyst.

Grossly, no particular abnormal findings in the brain; however, areas presenting focal, irregular malacia were at the top of frontal lobe, medulla oblongata and the left mid-brain after fixed with 4% formalin. Moreover, thrombosis was found at the right medulla oblongata after carefully examination on series several cut section.

## **CASE RESULT**

### **Histopathologic Findings:**

**Cerebrum and brainstem:** There were multifocal liquefactive necrosis characterized by loss of neuropil with replacement by eosinophilic cellular debris and moderate numbers of gitter cells. A low amount of variably sized clear vacuoles was found scattered throughout the affected parenchyma. A mild neuronal loss with neuronal degeneration characterized by hypereosinophilic, chromatolytic, shrunken and pyknotic neurons was found. With the Luxol fast blue stain, the demyelination was shown as reduced staining intensity in the lesions.

**Medulla oblongata:** In arachnoid mater was a thrombus consisted of abundant red blood cells and fibrin. In medulla parenchyma was another thrombus consisting of abundant red blood cells and fibrin, moderate numbers of degenerative neutrophils, and calcification were present in some area of thrombus.

**Spinal cord, C2-C8, T13-L2:** In the dura mater were multifocal osseous metaplasia admixed with basophilic mineralization. Within subarachnoid space, blood vessels were surrounded by low numbers of lymphocytes that focally extend into the surrounding meninges. In dorsal and ventral rootlets of spinal cord there were Wallerian degeneration characterized by dilated myelin sheaths with swollen and axons loss. Occasional foci of mineralized material were also noted.

**Myocardium and aorta:** Multifocally, the tunica media and intima of small and middle-sized arteries of the myocardium were thickened by hypertrophic smooth muscle cells and amorphous to eosinophilic material. The left and right atrioventricular valves were moderately expanded by increased mucinous matrix and there was mild multifocal interstitial fibrosis within the ventricular myocardium. Among the denser layers of collagen were loose, lightly stained zones with small fibrocytes. Moreover, focally expanded by irregular plaque of amorphous, eosinophilic to hyalinized connective tissue, admixed with eosinophilic acellular fibrillary material and occasionally plump fibroblasts was also noted. Small numbers of hemosiderin-containing macrophages and inflammatory cells extend into the affected myocardium. The base of the aorta showed extensive degenerative changes, which included calcification, bone metaplasia, and formation of cartilages. The cartilaginous foci were surrounded dense fibrous tissue admixed with adipocytes.

### **Laboratory Examination:**

1. Luxol fast blue stain was performed, the deep blue color of the vacuolated and/or liquefactive necrotic areas was replaced by a light blue staining.
2. Congo red stain was negative for amorphous to eosinophilic material in arteries of myocardium.

### **Morphological Diagnosis:**

1. Encephalomalacia, multifocal and asymmetrical, with chromatolysis and demyelination, chronic, severe, cerebrum and brainstem.
2. Thrombi, focal, subacute, severe, arachnoid mater, medulla oblongata.
3. Wallerian degeneration, multifocal, chronic, moderate, with osseous metaplasia and mineralization, dorsal and ventral rootlets, C2-C8 and T13-L2, spinal cord.
4. Arteriosclerosis, severe, multifocal, chronic, with fibrosis and myxomatous degeneration of the atrioventricular valves, heart.

### **Differential Diagnosis:**

1. Vasculitis
2. Arteriosclerosis
3. Vascular degeneration
4. Aging

### **Diagnosis:**

### Discussion:

According to neurological examination, clinical signs revealed tetraparesis, increased in muscle tone of his left side, positive crossed extensor of hindlimbs, lack of cutaneous trunci reflex at T13-L2. Therefore, based on the findings, the lesion was speculated locating at brainstem. After the trimming, thrombus and malacia were found at medulla oblongata. And it was inferred that the formation of the thrombus was attribute to the vascular degeneration. The thrombus posed a great significance in the development of the disease, since which might lead to infarction, ischemia, brain malacia and paralysis<sup>(1)</sup>. Regarding the reasons that might form the thrombus in this case, atherosclerosis, vasculitis and aging are needed to be consideration.

Atherosclerosis and endocardiosis could be spotted in the heart, both lesions could cause disturbance of blood flow, which in turn could lead to thrombosis<sup>(5)</sup>.

Vasculitis is characterized by inflammatory cells infiltrating in blood vessel wall, there are several causes of vasculitis, including immune mediated, drug, infectious factor. However, there were no significant findings of inflammatory lesions in microscopic.

According to neuroanatomy, multifocal malacia could be seen in mid brain and pons, with multifocal thrombus and calcification in medulla oblongata<sup>(3)</sup>. Lesions of the brainstem produced upper motor neuron (UMN) signs in all four limb or the limbs on one side, leading to tetraparesis or hemiparesis. The gait and postural reactions can be observed prominently when the paresis or paralysis was produced by brainstem lesions. When brainstem lesions were larger or extensive, cranial nerve signs would be present, providing important localizing signs, including lower motor neuron (LMN) or sensory. Cranial nerve dysfunction will be ipsilateral to the lesion at brainstem, while motor dysfunction might be ipsilateral or contralateral, which depends on the degree of lesion and the affected pathway. In addition, when lesion occurs in mid brain and pons, the mental status can be changed, including signs from dullness to coma<sup>(4)</sup>.

Several lesions in this case are typical aging problems. Non-functional nodular hyperplasia was often found in liver, spleen and pancreas. Periglomerular fibrosis and glomerulosclerosis in kidney, arteriosclerosis of aorta, endocardiosis of heart, osseous metaplasia of dura mater and spine dura<sup>(2)</sup> were observed in this case, and all these mentioned lesions were indicative of aging. The dog was paralysis due to brainstem lesion. With the absence of nerve signals from brainstem, the nerve fiber began to degenerate and lose function. With the histopathological findings of extensive degeneration of spinal rootlets and multifocal thrombus as well as calcification region in the brainstem, we speculated that it was reasonable to deduce that the dog might have had lesions which did not show any significant clinical signs the owner could have noticed.

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**Case No. 501****Slide Number: 436613****Slide View:**[http://www.ivp.nchu.edu.tw/slide\\_view.php?id=1446](http://www.ivp.nchu.edu.tw/slide_view.php?id=1446)

蘇雪妍, 病理科住院醫師, 天主教耕莘醫院  
陳燕麟, 病理科 主治醫師, 天主教耕莘醫院

**Case report**

A man with the most aggressive thyroid cancer

**Clinical history**

This 83 years old male patient with past history of brain stem hemorrhage, hypertension and BPH was under regular medication control. He had cough with white sputum for about one month. Family noticed he slept in the most of the day time and snoring during sleeping. He also has dizziness and unsteady gait in recent 2 weeks. So he visited neurology OPD and chest X ray revealed an upper mediastinum mass. He was referred to chest OPD and then admitted for further evaluation and treatment. Chest CT and Brain MRI were arranged. A 6.1 cm hypodense mass was noted in right thyroid lobe with intrathoracic extension. Mediastinal and retropharyngeal lymphadenopathy and thrombosis of right internal jugular vein were also seen in chest CT. No evidence of brain metastasis in Brain MRI. On blood investigations, normal thyroid function test and elevation of thyroglobulin level(209.67ng/ml) and mild leukocytosis. On third day of hospitalization the patient suffered stridor and dyspnea. Thereafter, he was transferred to ICU and endotracheal intubation was done. Bilateral total thyroidectomy with transcervical removal of intrathoracic tumor was done on 2018.01.16.

**Clinical differential diagnosis**

- Primary thyroid cancer
- Right upper lobe lung cancer with thyroid metastasis
- Mediastinal tumor r/o lymphoma

**Gross examination**

The specimen consisted of both lobes of thyroid gland weighing 60 gm. Right lobe was 6x 4.5 x 4 cm in size and left lobe was 4.5 x 3.8 x 3 cm in size and fixed in formalin. Grossly, the tumorous dark gray tissue over-grew the thyroid and replaced almost all of it, which showed soft in consistency. Marked necrosis was noticed

**Microscopic findings**

Microscopically, the sections show picture of anaplastic carcinoma with mainly spindle cell pattern, marked necrosis and prominent vascularity. The tumor cells show capsule invasion and vascular invasion. Angiotropism with infiltrate medium-sized veins was also noted.

**Differential diagnosis**

- Anaplastic carcinoma thyroid
- Poorly differentiated thyroid carcinoma
- Spindle variant of papillary thyroid carcinoma

**Immunohistochemical stain**

Vimentin :(+), CK: focal (+), CEA: (-), TTF-1: focal (+), thyroglobulin focal (+)

P53 :(+), Ki67 :(+)>30%, Cyclin D (+), BCL2: focal (+)

Molecular result:

BRAFV600E: Detected

NRAS, KRAS, HRAS, RET-PTC: Non detected

**Diagnosis:** Anaplastic carcinoma thyroid (spindle cell type)

**Discussion**

Anaplastic thyroid carcinoma (ATC) represents the most aggressive extreme of the clinical

spectrum of thyroid epithelial neoplasms, being one of the most lethal human tumors. It constitutes less than 5% of clinically recognized thyroid malignancies but it accounts for more than half of the deaths for thyroid cancer, with a mortality rate that is over 90% and a mean survival of six months after the diagnosis. It is defined by the WHO as a highly malignant tumor wholly or partially composed of undifferentiated cells that retain features indicative of an epithelial origin, on immunohistochemical

or ultrastructural ground. It usually affects elderly people, with a mean age in the mid-60s, and shows a female predominance.

Grossly, ATC is well recognized as a large, necrotic, and hemorrhagic mass that is typically widely invasive, often replacing most of the thyroid gland parenchyma with infiltration of the surrounding soft tissue and adjacent structures of the neck.

The histological categories are sarcomatoid and epithelioid-squamoid. Common features to all patterns of ATC are hypercellularity, large foci of necrosis, marked invasiveness, and angiotropism with a tendency to infiltrate medium-sized veins and arteries, replacing their muscular wall. Careful examination of primary ATC tumors reveals coexisting areas of WDTC in 80% to 90% of cases. ATCs show a variable immunophenotype. Immunoreactivity for cytokeratin is present in 40% to 100% of cases according to the different series. Vimentin is consistently present in the spindle cell component, whereas EMA and CEA are particularly expressed in the squamoid cells. Typically, ATC cells are not immunoreactive for thyroglobulin, calcitonin, TTF-1, or RET/PTC oncoprotein. PAX8 seems to have a useful diagnostic role in specific settings, having been found in 79% of ATCs and in up to 92% of ATCs showing squamoid features, whereas it is negative in head and neck squamous carcinoma and lung carcinoma.

A wide variety of genetic alterations are found in ATC. The most frequently mutated gene is Tp53 (30-70%). Other recurring alterations include BRAFV600E mutation (20%) and alterations involving RAS genes (NRAS, KRAS, or HRAS: 20%), PIK3CA (10-20%), PTEN (10-15%) and ALK.

EGFR is expressed in ATC and had been used to guide targeted treatment in selected patients. The prognosis is grave, with a mortality rate of >90%. Older patient age, acute symptoms, leukocytosis and bulky infiltrative disease are poor prognostic risk factors.

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## Case Number 502

Slide No.: NTU2017-2268

Slide View:

[http://www.ivp.nchu.edu.tw/slide\\_view.php?id=1445](http://www.ivp.nchu.edu.tw/slide_view.php?id=1445)

[http://www.ivp.nchu.edu.tw/slide\\_view.php?id=1447](http://www.ivp.nchu.edu.tw/slide_view.php?id=1447)

Hsieh, Yu-Han (謝宇涵), DVM<sup>1</sup>; Li, Wen-Ta (李文達), DVM, MS<sup>1</sup>; Hsu, Yung-Hsiang (許永祥), MD, MS<sup>2</sup>; Chang, Hui-Wen (張惠雯), DVM, PhD<sup>1</sup>; Jeng, Chian-Ren (鄭謙仁), DVM, PhD<sup>1</sup>; Pang, Victor Fei (龐飛), DVM, PhD<sup>1</sup>; Wang, Fun-In (王汎熒), DVM, PhD<sup>1</sup>; Liu, Chen-Hsuan (劉振軒), DVM, PhD<sup>1</sup>

<sup>1</sup>Graduate Institute of Molecular and Comparative Pathobiology, School of Veterinary Medicine, National Taiwan University (國立臺灣大學獸醫專業學院分子暨比較病理生物學研究所);

<sup>2</sup>Department of Pathology, Tzu Chi University and Buddhist Tzu Chi General Hospital (慈濟大學醫學院病理學科及佛教慈濟綜合醫院病理科)

## **CASE HISTORY**

### **Clinical History:**

A 10-year-old intact female Formosan serow (*Capricornis swinhoei*) was lying on the ground without external wounds and there was no improvement after fluid therapy.

### **Gross Findings:**

Multiple irregularly-shaped white to grey growths were noted on both ureters and infiltrated into the peripheral soft tissues and organs in retroperitoneal space, including the urinary bladder, kidney, uterus, and adrenal glands. The growths also infiltrated into the lumen of left ureter and thereby obstructed the urinary flow, which led to marked dilation of left ureter and hydronephrosis of left kidney. The cut sections of the growths were lobulated and homogenous beige with firm texture. The wall of urinary bladder was significantly thickened and hardened, and the dorsal aspect of urinary bladder was adhered to the uterus. On the mucosa surface of urinary bladder, there were multifocal variably-sized and polyp-like beige or red structures.

## **CASE RESULT**

### **Histopathologic Findings:**

**The abdominal main mass:** The growths around the ureters are poorly demarcated, non-encapsulated and revealing strong stromal invasion with marked desmoplasia and multifocal necrosis. They are composed of neoplastic round cells arranged in indistinct nests separated by delicate fibrovascular stroma. Peripheral palisading of the neoplastic cells with formation of rosettes is also observed. The neoplastic cells are highly pleomorphic with scant eosinophilic cytoplasm. Their nuclei are hyperchromatic and round to ovoid with finely stippled chromatin and inconspicuous nucleolus. The diameter of the neoplastic cells is equal to or lesser than 2 red blood cells ( $\leq 15 \mu\text{m}$  in diameter), indicative of small cell size. The normal architectures of liver and the left adrenal cortex are multifocally disrupted by the same neoplastic cells. Furthermore, the same neoplastic cells massively infiltrate in the adhering tissue between urinary bladder and uterus, and they transmurally infiltrate in the walls of urinary bladder and uterus. Aggregates of the similar neoplastic cells are multifocally found in lymphatic/blood vessels, indicative of lymphovascular invasion. In liver, multifocal aggregation of the neoplastic cells with severe fibroplasia surrounded are noted.

**Kidneys:** Local-extensively, the cortex, medulla and renal pelvis are variably replaced by proliferating fibrous connective tissue with shrunken and atrophied glomeruli and renal tubules. Some renal tubules are severely dilated and lined by degenerated or vacuolated epithelial cells with varied amounts of homogenous proteinaceous substance and casts in the lumens.

### **Morphological Diagnosis:**

1. Malignant small round cell tumor, with metastasis to liver and involvements of ureter, urinary bladder, uterus, and left adrenal gland



2. Hydronephrosis, with interstitial fibrosis, left kidney

#### **Differential Diagnosis:**

Considering the anatomic location and the cellular morphology/arrangement, the differential diagnosis of a “malignant small round cell tumor” includes neuroendocrine carcinoma, desmoplastic small round cell tumor, primitive neuroectodermal tumor (PNET; Ewing sarcoma), nephroblastoma, neuroblastoma, round cell sarcoma such as lymphoma, small cell rhabdomyosarcoma, small cell osteosarcoma, dysgerminoma and melanoma.

#### **Histochemical Staining:**

Under argyrophil staining, the internal control (Chromaffin cells of adrenal glands) is positive, but the neoplastic cells are negative.

#### **Immunohistochemical (IHC) Staining:**

For IHC stainings, antibodies against NSE, CK, CD99, desmin, Fli-1, vimentin, S100, chromogranin A, synaptophysin and PAX-8 are used. Most of internal controls except chromogranin A and CD99 from the normal tissue are positive. The neoplastic cells show prominent cytoplasmic positivity for NSE and CK, and prominent nuclear positivity for Fli-1, but they are negative for vimentin, desmin, S100, synaptophysin and PAX-8.

#### **Final Diagnosis:**

Primitive neuroectodermal tumor (PNET), most likely originating from ureter, with metastasis to liver and involvements of urinary bladder, uterus and left adrenal gland

### **DISCUSSION**

In the present case, the tentative diagnosis of malignant small round cell tumor (MSRCT) is made by its cell morphology (small round cells), cell arrangement (peripheral palisading with formation of rosettes) and aggressive biological behavior (stromal invasion, neoplastic emboli, and metastatic lesions). In order to identify the cell origin of the MSRCT, IHC stainings were performed. The negative result of vimentin and positive result of CK rule out lymphoma, small cell rhabdomyosarcoma, and dysgerminoma. Negative results of PAX-8 and S100 respectively exclude nephroblastomas and melanoma. Desmoplastic small round cell tumors are usually positive for desmin, and it is inconsistent with the current case. In humans, approximately 90% cases of PNETs have a specific translocation of t(11; 22)(q24;q12) that results in fusion of the EWS and FLI-1 genes with FLI-1 protein overexpression, and nearly all PNETs are positive for CD99, the MIC2 gene product.<sup>3,4,6</sup> In contrast, neuroblastomas are lack the EWS/FLI1 gene fusion and MIC2 gene expression. Therefore, IHC stainings of FLI-1 and CD99 are crucial for distinguishing PNETs from neuroblastomas. Although the cross reactivity of CD99 is poor in Formosan serow, the IHC results (positive for Fli-1, NSE and CK, but negative for vimentin, PAX-8 and desmin) are compatible with the hallmark of PNETs, and thus the diagnosis of PNETs is made.<sup>5</sup>

PNETs are a group of highly malignant tumors composed of small round cells, which typically arise from multipotent progenitor cells derived from neuroectoderm. They usually reveal varying degrees of neuronal differentiation and almost invariable EWSR 1 gene rearrangement, which is a consequence of a reciprocal t(11;22)(q24;q12) chromosomal translocation.<sup>2</sup> Therefore, the neoplastic cells of PNETs potentially have a diverse phenotypic differentiation, which reflects the degree of neuroectodermal differentiation.<sup>2</sup> PNETs can arise from soft tissues (extraosseous subtype) or bone (osseous subtype). Extraosseous PNETs may arise in a variety of anatomic locations, and the most common extraosseous site of PNETs is thoracopulmonary region (*Askin tumor*). However, PNETs at other sites, such as head, neck, kidney, and retroperitoneal/paraspinal regions, have also been reported.<sup>7</sup> Extraosseous PNETs are more aggressive with a worse prognosis comparing to osseous PNETs, and local recurrence and metastasis to regional lymph nodes, lung, liver, and bone frequently occur. There are several prognostic factors of PNETs have been reported in humans, such as tumor staging, histological grading, age, surgical margin status, beginning time of treatment.<sup>10</sup> In the present case, the PNET is most likely arising from the ureter because the ureter is the most affected site when comparing to other organs. In humans, PNET originating from urinary tract is extremely rare and

usually behave more aggressively than those from other anatomic locations.<sup>6</sup> Due to the aggressive biological behavior of PNET, only early diagnosis with appropriate medical treatment can lead to a relatively favorable clinical outcome, but it is difficult to be achieved in wild animals.

PNETs have not been reported in Formosan serow, and thus their pathogenesis and biological behavior are still poorly understood. Further investigations on cytogenetics (such as the chromosomal translocation of t(11; 22)(q24;q12) in humans) by fluorescent in situ hybridization (FISH) and/or reverse transcriptase-polymerase chain reaction (RT-PCR) of the t(11;22) are warranted to unveil the mysteries of PNETs in wild animals.

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**Case Number: 503**

**Slide No.: E216\_1140A**

**Slide View:**

**[http://www.ivp.nchu.edu.tw/slide\\_view.php?id=1451](http://www.ivp.nchu.edu.tw/slide_view.php?id=1451)**

**Ming-Tsung Lai(賴銘淙), M.D. PhD.**

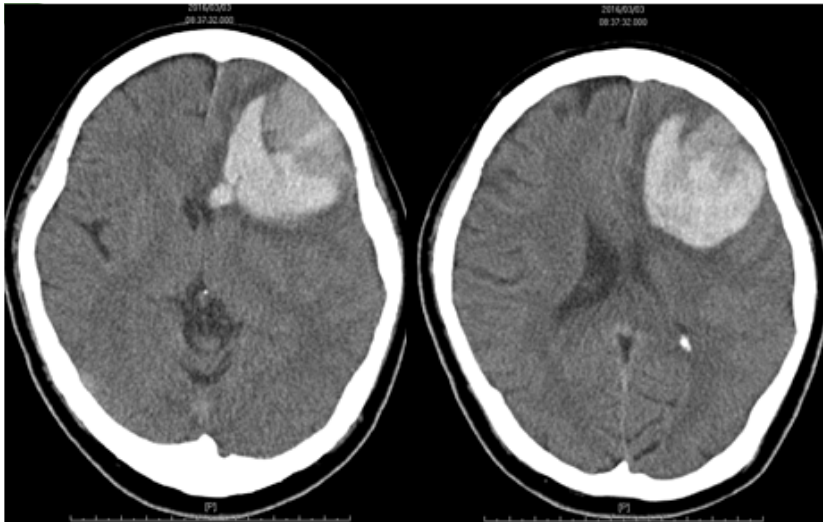
**Department of Pathology, Taichung Hospital, Ministry of Health and Welfare Taiwan  
(R.O.C) (衛生福利部臺中醫院病理科)**

#### CASE HISTORY

Signalment: a 63-year-old male

#### Clinical History:

- A 63 year-old male was admitted due to unable to talk (aphasia) since 3AM and right side weakness since 6 AM. He had past history of 1. Hypertension under oral medication for years 2. Hodgkin lymphoma, stage IV s/p bone marrow transplantation in CMUH in these 4 years 3. thyroid cancer s/p thyroidectomy. He was sent to our ER. The vital sign shows: BT: 36.7, HR: 74, RR:18, BP: 148/87mmHg. PE revealed left facial palsy, pupil 3+/3+, muscle power upper 5/0-1, lower 4/0-1. Aphasia was also noted. CT w/ contrast showed 4.5\*5.0cm heterogenous enhancement over left frontal region with mid shift. Under impression of tumor rupture with midline shift, he was admitted for further management and evaluation.



#### Gross Finding:

The specimen submitted consists of seven tissue fragments measuring up to 7.0x3.5x3.0cm in size. Grossly, they are dark-brownish to gray and firm. Marked hemorrhage of blood clot and attached with a piece of meninges.

#### CASE RESULT:

Histopathologic Finding:

The tumor composed of prominent microfollicular patterns without capsulation and meninges penetration and focal vascular invasion with hemorrhage. No Psammoma bodies or papillary picture is seen. The immunohistochemical stains show CK7(+), TTF-1(+), EMA(-), Thyroglobin(+)

Diagnosis:

Metastatic follicular carcinoma

Differentiated Diagnosis:

1. Meningioma
2. Choroid plexus papilloma and carcinoma
3. Teratoma
4. Metastatic carcinoma: lung, G-I, kidney
5. Metastatic thyroid cancer: papillary or follicular

Discussion:

1. Secondary CNS neoplasm: (1).account for approximately 15% of intracranial neoplasm;(2). are eventually present in approximately 30% of patients with disseminated cancer; (3). present most frequently in the sixth and seventh decades. (4). are solitary in approximately 50% of patients. (5). are derived most commonly(50% of patients) from primary neoplasms in the lung. (6). present before the primary neoplasm in approximately 15% of patients.
2. Approximate proportion of metastatic CNS neoplasms: lung(50%), Breast(15%), Skin melanoma(10%), Kidney(5%), Other(20%)
3. Neoplasms that very rarely metastasize to the brain include: Prostatic carcinoma, Ovarian carcinoma, Hodgkin's lymphoma
4. Approximate frequency with which specific neoplasms metastasize to the CNS: Skin melanoma(50%), Carcinoma of lung(35%), Carcinoma of breast(20%), Renal carcinoma(10%).
5. Follicular thyroid carcinoma(FTC) is a purely follicular malignant tumor with no papillary or other elements. It makes up 15%-20% of thyroid tumors. Most patients are older than 40 and female(3:1). Incidence of follicular carcinoma is higher in endemic goiter areas among people who do not receive iodine supplements. Irradiation to the gland may precede FTC in some cases.
6. Invasive FTC usually presents few diagnostic problems since it extends through its capsule or shows vascular invasion. Proliferative marker such as Ki67 may in some instances assist in the diagnosis. The tumors stain positively for thyroglobulin and TTF-1.
7. Oncocytic(Hurthle cell) carcinoma are tumors of follicular derivation composed mainly(>75%) of oncocytes. These tumors account for 4%-5% of thyroid malignancies and tend to behave more aggressively than regular follicular cancer. FTC differs from PTC in that its metastases are blood-borne, not lymphatic, and go mainly to the lung and bones of the shoulder, pelvic girdle,

sterunum and skull.

8. Follicular tumors with oncocytic morphology have chromosomal changes and abnormalities in mitochondrial DNA like other thyroid tumors with oncocytic features. The survival of about 50% for the widely invasive form. FTC is treated with unilateral lobectomy. Metastases can be treated with radioiodine.

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# 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 本會置秘書長一人，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。但秘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	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
				國立臺灣大學獸醫專業學院博士		
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 大醫院 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學研究所博士	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

基金收支表

中華民國 106 年 1 月 1 日至 106 年 12 月 31 日止

單位：新臺幣(元)

收			支			出		
科目	名稱	金額	科目	名稱	金額	科目	名稱	金額
準備基金		10,400	準備基金		0			
歷年累存		10,400						
本年度提撥		2,400						
			結餘			12,800		

理事長：

常務監事：

秘書長：

會計：

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壹萬貳仟捌百元。

中華民國比較府理學會

現金出納表

中華民國 106 年 1 月 1 日至 106 年 12 月 31 日止

單位：新臺幣(元)

收		入		支		出		
科	目	名	稱	類	目	名	稱	
目	稱	金	金	科	金	金	金	
上	期	結	存	86,540	本	期	支	出
本	期	收	入	101,748	本	期	結	存
合		計	計	188,288	合		計	計
								53,676
								134,612
								188,288

理事長:

會計:

秘書長:

常務監事:

會計:

秘書長:

會計:

中華民國比較病理學會

資產負債表

中華民國 106 年 12 月 31 日

單位：新臺幣(元)

資	產	負債	基金	暨	餘總
歷年歲末累計結餘	86,540				
提撥準備基金	0				
106 年度餘總	48,072				
		合作金庫活存	84,895		
		現金	49,717		
合 計	134,612	合 計	134,612		

理事長: 

常務監事: 

秘書長: 


會計: 

中華民國比較病理學會  
收支決算表  
中華民國 106 年 1 月 1 日至 106 年 12 月 31 日  
單位：新臺幣(元)

款	項	目	科	目	名稱	決算數	預算數	決算與預算比較數		說明
								增加	減少	
1					本會經費收入	101,748	58,500	43,248		
	1				入會費	11,600	4,000	7,600		一般會員 11 人，學生 8 人
	2				常年會費 (三年內)	54,100	30,000	24,100		一般會員 39 人，學生 22 人
	3				贊助會費	32,000	20,000	12,000		廠商捐款
	4				利息收入	48	80		32	
	5				其他收入	4,000	4,420		420	單次報名
					本會經費支出	53,676	58,500		4,824	
2					人事費	6,000	8,000		2,000	
	1				兼職人員車馬費	0	8,000		8,000	
	2				其它人事費	6,000	0	6,000	0	專題演講者車馬費(共 3 位)
					辦公費	11,634	14,000		2,366	
	1				印刷費	9,488	12,000		2,512	印刷第 69、70 及 71 次會議手冊
	2				旅運費	0	0		0	
	3				郵電費	546	2,000		1,454	
	4				公共關係費	1,600	0	1,600	0	
					業務費	34,023	25,800	8,223		
	1				會議費	34,023	25,800	8,223		
					雜費支出 (獸醫再教育)	2,019	10,000		11,981	
					登錄)					
					提撥基金	2,400	700		700	
3					本期餘溢	48,072	0			

理事長：

常務監事：

秘書長：

會計：

# 中華民國比較病理學會

## 107 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招募，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，缺繳三年以上徹底實行停權

#### 3. 召開會議

召開會員大會一次，審查 107 年度工作報告與經費收支狀況，研議

107 年度之工作計劃及預算

#### 4. 學術活動

持續辦理三次研討會，並邀請國內外專家學者做學術性的演講

### 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

#### 5. 進行獸醫再教育學分申請及協助會員學分認證



中華民國比較病理學會  
收支預算表

中華民國 107 年 1 月 1 日至 107 年 12 月 31 日

單位：新臺幣(元)

款	項	目	目		上 年 度 預 算 數	本 年 度 預 算 數	本 年 度 與 上 年 度 預 算 比 較 數		說 明
			名	稱			增 加	減 少	
1			85,080		58,500		26,580		
	1	本會經費收入							
		入會費	6,000		4,000		2,000		學生入會 100 元;一般會員 1000 元
	2	常年會費	35,000		30,000		5,000		學生會員 100 元;一般會員 1000 元
	3	贊助會費	40,000		20,000		20,000		贊助廠商 5000 元
	4	利息收入	80		80				
	5	其他收入	4,000		4,420		420		
2			65,880		58,500		7,380		
	1	本會經費支出	6,000		8,000		2,000		
		人事費			8,000				
	1	兼職人員車馬費	0		8,000				
	2	其他人事費	6,000				6,000		講師費 2000 元
		辦公費	15,380		14,000		1,380		
	1	印刷費	14,080		12,000		2,080		會議手冊印製
	2	旅運費	300		0		300		病例切片郵寄
	3	郵電費	1,000		2,000				
	4	公共關係費	0		0				
		業務費	35,800		25,800		10,000		
	1	會議費	35,800		25,800		10,000		
	4	雜費支出	8,000		10,000				
	5	提撥基金	0		700		300		如有盈餘,得依規定提列 5% 以上
3		本期餘額	19,200		0				

會計：

秘書長：

常務監事：

理事長：

## 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. 63<sup>rd</sup> 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	Ependyoblastoma	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	

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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
72.	9	Reticulum cell sarcoma	Mouse	國家實驗動物繁殖及研究中心
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, papillary carcinoma, metastatic	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
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

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				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	臺灣動物科技研究所

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 valve	Human	新光醫院病理科	
	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)-positive 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	台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	
	腫 瘤		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	
		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	

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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
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	Feline	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 cholangiocarcinoma	Human	基隆長庚醫院
	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
	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



腫 瘤	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
	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 lymphangiomyomatosis	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	

腫 瘤	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
	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 ( <i>Astrochelys radiata</i> )	Tortoise	台灣大學獸醫專業學院分子暨比較病理生物學研究所
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	Malignant 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	
490	71	Xp11.2 translocation renal cell carcinoma	Human	羅東博愛醫院病理科	
491	71	Anaplastic renal cell carcinoma	Djungarian hamster	國立中興大學獸醫病理生物學研究所	
493	71	Mucin-producing urothelial-type adenocarcinoma of the prostate (MPUAP)	Human	天主教耕莘醫療財團法人耕莘醫院	
494	71	Left paratesticular dedifferentiated liposarcoma with leiomyomatous differentiation.	Human	天主教耕莘醫療財團法人耕莘醫院	
495	71	Renal nephroblastoma, blastema-predominant with metastasis to gingiva, renal mass	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	
496	71	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.	Dog	長青動物醫院	
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 cavitory 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 ( <i>Lawsonia intracellularis</i> infection)	Porcine	屏東縣家畜疾病防治所
68.	9	Liver abscess ( <i>Klebsillae pneumoniae</i> )	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 <i>Streptococcus</i> 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
	20	Mycotic aneurysm of jejunal artery secondary to infective endocarditis	Human	慈濟醫院病理科
	21	Chronic nephritis caused by <i>Leptospira</i> spp	Pig	中興大學獸醫學院
	21	Ureteropyelitis and cystitis	Pig	中國化學製藥公司

細菌

	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 turtles	屏東科技大學獸醫系
	42	<i>Staphylococcus</i> 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, <i>Coxiella burnetii</i>	Goat	台灣動物科技研究所
321	46	Pneumonia, <i>Burkholderia pseudomallei</i>	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	<i>Chromobacterium violaceum</i> Septicemia	Gibbon	Bogor Agricultural University, Indonesia
353	50	Salmonellosis	Pig	國立中興大學獸醫學院
367	52	Melioidosis ( <i>Burkholderia pseudomallei</i> ), lung	Human	花蓮慈濟醫院
370	52	Suppurative bronchopneumonia ( <i>Bordetellae trematum</i> ) with <i>Trichosomoides crassicauda</i> infestation	Rat	國立中興大學獸醫學院
374	53	Pulmonary coccidiomycosis	Human	彰化基督教醫院
375	53	Paratuberculosis in <i>Macaca cyclopis</i>	<i>Macaca cyclopis</i>	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, <i>Mycobacterium abscessus</i>	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	<i>Neisseria</i> Infected Pneumonitis	Cat	中興大學獸醫學系
385	54	<i>Mycobacteria avian complex</i> dacryocystitis	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 <i>Streptococcus</i> 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	<i>Mycobacterium avium</i> 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
	489	71	Malakoplakia due to <i>Escherichia coli</i> infection, left testis	Human	佛教慈濟綜合醫院暨慈濟大學
	492	71	Cystitis, bilateral ureteritis and pyelonephritis, hemorrhagic, necrotic, purulent, severe, diffuse, chronic progressive, urinary bladder, ureters and kidneys	Dog	國立中興大學獸醫病理生物學研究所
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	Pseudorabies	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
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 II 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

病毒

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 <i>Salmonella typhimurium</i> .	Swine	屏東縣家畜疾病防所
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
23.	3	Chromomycosis	Human	台北病理中心

黴菌

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 cavitory 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 2. Demyelinating canine distemper encephalitis	Dog	台灣大學獸醫學系
	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

黴菌

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 <i>Toxocara canis</i> 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 <i>Angiostrongylus cantonensis</i>	Human	台北榮民總醫院 病理檢驗部
	156	19	<i>Parastrongylus cantonensis</i> infection	Formosan gem-faced civet	中興大學獸醫學院
		19	<i>Capillaria hepatica</i> , <i>Angiostrongylus cantonensis</i>	Norway Rat	行政院農業委員會 農業藥物毒物試驗所
	29	Colnorchiasis	Human	高雄醫學院附設醫院	
	29	Trichuriasis	Human	彰化基督教醫院	
寄生蟲		29	<i>Psoroptes cuniculi</i> 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 philippinensis	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 <i>Spironucleus (Hexamita) muris</i>	Rat	國家實驗動物繁殖及研究中心
寄生蟲	327	46	Dermatitis, mange infestation	Serow	中興大學獸醫學院
	328	46	<i>Trichosomoides crassicauda</i> , 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 ( <i>Bordetellae trematum</i> ) with <i>Trichosomoides crassicauda</i> 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研究中心
	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
		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 lymphadenitis)	Lymphadenitis	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 transmigration placental	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	Eosinophilic granuloma, Right suboccipital epidural mass	Human	羅東博愛醫院病理科
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
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
383	54	Langerhans cell histiocytosis	Human	聖馬爾定醫院病理科

其他

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 ( <i>Iguana iguana</i> )	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	Parastrongyliasis (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

姓名	中文		姓別	<input type="checkbox"/> 男 <input type="checkbox"/> 女	出生 身 份 証	民國	年	月	日	出生地	
	英文		會員身份： <input type="checkbox"/> 一般 <input type="checkbox"/> 學生 <input type="checkbox"/> 贊助								
學歷	(1)				稱謂(圈選) 先生 小姐 醫師 獸醫師 教授 博士 研究員 主任 其他:						
	(2)				研究 興 趣	(1)					
	(3)					(2)					
	(4)					(3)					
主要 經 歷	機關名稱				職務	起		止			
						年	月	年	月		
						年	月	年	月		
現職						年	月	年	月		
<p>通訊地址 現在： 電話： 傳真：</p> <p>永久： 電話 傳真：</p> <p>電子信箱(E-mail)：</p>											
<p>茲 贊 同 貴會宗旨擬加入為會員嗣後並願遵守一切章共圖發展 此 致 中華民國比較病理學會</p> <p>申請人 簽章</p> <p>介紹人 簽章</p> <p>介紹人 簽章</p> <p>中華民國 年 月 日</p>										審核結果	