中華民國比較病理學會

Chinese Society of Comparative Pathology

第 56 次比較病理學研討會

National Pingtung University of Science and Technology

國立屏東科技大學 主辦

November 3, 2012 (中華民國 101 年 11 月 3 日)

Chinese Society of Comparative Pathology

中華民國比較病理學會 協辦

SCHEDULE

56TH MEETING OF COMPARATIVE PATHOLOGY

中華民國比較病理學會第 56 次比較病理學研討會

Date: November 3, 2012 (Sat) 09:30~16:30　　時間：101 年 11 月 3 日(星期六) 09:30~16:30

Location: National Pingtung University of Science and Technology

地點：屏東科技大學獸醫學院獸醫學系 VM106 教室

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Time(時間)	Schedule(議程)		Moderator(主持)
09:20~09:40	Registration (報到)		
09:40~10:00	Opening Ceremony (致詞) – Dr. Yuan-Kuang Guu (古源光 校長)		
10:00~10:50	專題演講	Dr. Jai-Chyi Pei (裴家騏 教授) 講題：One World One Health	Dr. C. W. Shih 施洽雯 主任
10:50~11:10	Coffee Break		
11:10~11:40	Case 395	Yi-Chun Liao (廖翊君 獸醫師) Graduated Institute of Molecular and Comparative Pathology School of Veterinary Medicine, National Taiwan University (國立台灣大學分子暨比較病理研究所)	Dr. C. H. Liu 劉振軒 院長
11:40~12:10	Case 396	Tsung-Ching Liu (劉宗璟 獸醫師) Graduate Institute of Veterinary Pathobiology, National Chung Hsing University, Taichung (國立中興大學獸醫病理生物學研究所)	
12:10~13:30	Lunch, and Board Meeting (中華民國比較病理學會理監事會議)		
13:30~14:00	Case 397	Khin Than Win (葉麗青 醫師)/Shih-Sung Chuang (莊世松 醫師) Department of Pathology, Chi Mei Hospital (奇美醫院病理科)	Dr. Y. H. Hsu 許永祥 主任
14:00~14:30	Case 398	Hung-Yu Chen (陳閎鈺 醫師) Buddhist Tzu Chi General Hospital and University, Taiwan (佛教慈濟綜合醫院暨慈濟大學病理科)	
14:30~14:50	Coffee Break		
14:50~15:20	Case 399	Mu-Tsung Tsai (蔡睦宗 獸醫師) Pingtung County Livestock Disease Control Center (屏東縣家畜疾病防治所)	Dr. T. C. Chang 張聰洲 教授
15:20~15:50	Case 400	Hao-Kai Chang (張皓凱 獸醫師) Department of veterinary pathology, NPUST (國立屏東科技大學獸醫教學醫院病理科)	
15:50~16:30	General Discussion (綜合討論)		

目　　錄

為什麼地球只有一個健康的議題？

裴家騏

國立屏東科技大學野生動物保育研究所

在自然界中，傳染性疾病原本就是控制動物族群數量的一項非常重要的因子，所扮演的角色類似掠食者或是環境限制因子，不但會長期的限制宿主之族群或者調節宿主之族群大小，甚至造成物種區域性或全面性的滅絕。再者，生物所面臨的環境變遷及所受到的影響與日俱增，疾病發生的模式以及對各種動物族群（包括人類）之影響也隨之改變，嚴重者，甚至會威脅到族群的生存與延續。新興的「保育醫學（Conservation Medicine）」，即透過連結動物健康、生態系統健康，甚至人類健康等相關科學，以期分析於自然族群中所發生的相關疾病及寄生蟲問題，並進而了解相互間以及與生態系統間之動態影響及作用的機制。事實上，已經有越來越多的研究顯示，維護生物多樣性及生態健康對人類生命會有更實質也更重要的價值，例如，高野生動物多樣性的環境會產生病原的「稀釋效應（Dilution 或 Decoy effect）」，而明顯降低傳染性疾病在人類社會中爆發的威脅；自然資源的過度使用，可能會因為人群被迫改變食物種類，而造成新興疾病的形成；掠食者因疾病或棲地破碎化而減少後，會造成野鼠傳播疾病的增加。極高密度的飼養所造成人類疾病的議題也時有所聞。然而，全球而言，生物多樣性或自然生態卻面臨相當大的危機，包括：(1)物種的絕滅；(2)全球氣候變遷；(3)棲息地破壞及消失；(4)環境破碎化；(5)過度使用；和(6)外來種或家禽、家畜的衝擊（改變環境、競爭、掠食、疾病、雜交）。也因此，重視保育醫學領域的呼聲四起。台灣過去有部份關於野生哺乳動物疾病調查研究，其內容多侷限在野生的嚙齒目動物，同時因為研究主要目的是為了公共衛生防疫需要，研究內容也多只侷限在野鼠感染疾病之種類，而沒有進一步去探討更多的宿主種類及其他影響寄生蟲分佈之生態因子。近年陸續於國內野生動物個體記錄多起疾病發生，其中包含犬瘟熱病毒於食肉目物種族群之爆發，野生長鬃山羊疥癬蟎感染，以及大冠鷲禽痘病毒感染。這些少見的案例應該只是冰山的一角，應該即早開始進行更積極的野生動物疾病監測和研究。

CASE SIGNALMENT

56TH MEETING OF COMPARATIVE PATHOLOGY

November, 2012

(中華民國比較病理學會第 56 次比較病理學研討會)

Case No.	Presenter	Institution	Slide No.	Signalment
Case 395	廖翊君	Graduated Institute of Molecular and Comparative Pathology School of Veterinary Medicine, NTU (國立台灣大學分子暨比較病理研究所)	NTU2008-519A2	A 2.5-year-old intact male Golden Retriever
Case 396	劉宗璟	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)	CO11-0805A	Two 8-week-old LYD (weaned pigs)
Case 397	葉麗青	Department of Pathology, Chi Mei Hospital (奇美醫院病理科)	奇美 2012 09-0637-F	A 50 year old man
Case 398	陳閎鈺	Buddhist Tzu Chi General Hospital and University, Taiwan (佛教慈濟綜合醫院暨慈濟大學病理科)	S2011-8B	65-year-old man
Case 399	蔡睦宗	Pingtung County Livestock Disease Control Center (屏東縣家畜疾病防治所)	Q101-173-1 Q101-173-2	1-year-old, male, dairy goat, Alpine type, Caprine
Case 400	張皓凱	Department of veterinary pathology, National Pingtung University of Science and Technology (國立屏東科技大學獸醫教學醫院病理科)	0101-21260-1	3 years old Chihuahua, male, without castration

CASE DIAGNOSIS

56TH MEETING OF COMPARATIVE PATHOLOGY

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(中華民國比較病理學會第 56 次比較病理學研討會)

Case No.	Presenter	Institution	Slide No.	Diagnosis
Case 395	廖翊君	Graduated Institute of Molecular and Comparative Pathology School of Veterinary Medicine, NTU (國立台灣大學分子暨比較病理研究所)	NTU2008-519A2	Systemic Cryptococcus neoformans infection in a Golden Retriever
Case 396	劉宗璟	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)	CO11-0805A	Suppurative meningitis caused by Streptococcus spp in pigs
Case 397	葉麗青	Department of Pathology, Chi Mei Hospital (奇美醫院病理科)	奇美 2012 09-0637-F	Atypical meningioma
Case 398	陳閎鈺	Buddhist Tzu Chi General Hospital and University, Taiwan (佛教慈濟綜合醫院暨慈濟大學病理科)	S2011-8B	Gamma-knife-radiosurgery-related demyelination
Case 399	蔡睦宗	Pingtung County Livestock Disease Control Center (屏東縣家畜疾病防治所)	Q101-173-1 Q101-173-2	Listeric encephalitis in dairy goats
Case 400	張皓凱	Department of veterinary pathology, National Pingtung University of Science and Technology (國立屏東科技大學獸醫教學醫院病理科)	0101-21260-1	Canine Disseminated form Granulomatous Meningoencephalitis (GME)

Yi-Chun Liao (廖翊君)[1], Li-Sen Yeh(葉力森)[2], Victor Fei PANG (龐飛)[1], Chian-Ren Jeng (鄭謙仁)[1]
[1]Graduate Institute of Molecular and Comparative Pathobiology, School of Veterinary Medicine, National Taiwan University, Taipei
[2]Veterinary Medicine Teaching Hospital, National Taiwan University

CASE HISTORY:

Signalment: A 2.5-year-old intact male Golden Retriever

Clinical history:
A 2.5-year-old intact male Golden Retriever was referred for evaluation of a 2 months history of progressive ataxia, extended from hindlimbs to forelimbs, and vision deterioration. Neurological and ophthalmological examination revealed cerebellar ataxia and serous retinal detachment. Prior treatment included administration of corticosteroids, antimicrobials, and dextrose. Results of pre-referral CBC and serum biochemical analysis revealed no abnormalities except high creatinine concentration (11.7 mg/dL; reference range, 0.5 to 1.8 mg/dL). Negative result of canine distemper was diagnosed by RT-PCR test. An Enzyme-linked immunosorbent assay (ELISA) for Ehrlichiosis canis, Toxoplasma, and Chlamydia yielded negative results, and common aerobic culture also produced negative results. During the hospitalization, renal failure and septicemia occurred. Euthanasia was performed at the end due to persistent dysphagia, seizure, and shock with unbalanced hemodynamic status.

Gross findings:
Necropsy findings were systemically spread to multiple organs involving the lungs, heart, kidneys, pancreas, liver, spleen, lymph nodes, and eye, where the brain was predominantly. An irregular, soft to slightly firm, tan to gray gelatinous mass (approx. 0.5-1 cm in diameter) effaced the cerebrum and cerebellum bilaterally and extended through the rostral portion of the cerebral cortex in the region of the olfactory bulbs with hemorrhage. On transverse sectioning of the brain, the meninges surrounding the each side of all portions of the cerebrum to the medulla oblongata were expanded (1 to 3 mm in thickness) and the parenchyma was compressed by gelatinous pinpoint. The eye was irregularly lined by similar gelatinous material (up to 5 mm in thickness) under the retina. Multifocally, 5-10 mm diameter circular nodules have white to yellow-tan, soft centers present in the kidneys, heart, liver, pancreas, spleen, lymph nodes, and lungs.

Yi-Chun Liao (廖翊君)[1], Li-Sen Yeh(葉力森)[2], Victor Fei PANG (龐飛)[1], Chian-Ren Jeng (鄭謙仁)[1]
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[2]Veterinary Medicine Teaching Hospital, National Taiwan University

CASE RESULT:

Histopathological finding:

Microscopic examination of those tissues showed that the gelatinous masses were unencapsulated and multiple to coalescing, and were composed of sheets of fungal yeasts with distinctive soap-bubble appearance. These organisms were pale blue to pink staining, markedly refractile 5–20 μm in diameter and characterized by a central, spherical–oval, thin-walled, 2-8 μm clear capsule that appeared as a smoothly contoured clear unstained space or halo. Thin-necked budding forms were also found. The yeast cells were deeply stained and well delineated by GMS, PAS, and Mayer's mucicarmine stains. The Mayer's mucicarmine stain demonstrated the radiate or spiny appearance of capsular material. Small numbers of foamy macrophages, some of which contained intracytoplasmic yeasts, were interspersed among the organisms along with frequent perivascular aggregates of lymphocytes and plasma cells. The organisms and inflammatory changes caused expansion of the leptomeninges in partially areas of the cerebrum, cerebellum, and medulla oblongata; the most severe infiltration of the brain parenchyma was in the olfactory bulbs and the cerebral cortex, cerebellum, and leptomeninges. The remaining neuropil in infiltrated areas was vacuolated and had variable gliosis. Optic nerve and retina were multifocally infiltrated with organisms as far choroid and sclera. The small to large foci of kidneys, heart, liver, spleen, lymph nodes, lungs, had a similar appearance.

Laboratory examination:

The CAP59 gene was detected from tissue samples by PCR. Total DNA was extracted from olfactory bulb sample by QIAamp DNA mini kit (QIAGEN, Germany). Primer sequences were based on the sequence report [10]: primer S-2, 5'-GAG TGT CTC CGC AAC CCG CA-3'; primer S-2, 5'-CCT ACT CTG CCA AAT CAA CTC-3'. For reactions in which the expected size of the amplified CAP59 gene fragment was 597 bp in length. PCR consisted of initial denaturation at 94 °C for 5 min, followed by 35 cycles of denaturation at 94 °C for 1 min, annealing at 60 °C for 30 sec, elongation at 72 °C for 3 min, and followed by a final extension at 72 °C f or 3 min. Nucleotide sequences of the clinical isolate were aligned with those of Cryptococcus species, including neoformans var. grubii (serotype A) (AB019367), Cryptococcus neoformans var. neoformans (serotype AD) (AB019368), Cryptococcus gattii (serotype B, C) (AB019369 and AB019370). Sequence data were analyzed with the MegAlign

software (DNASTAR) with the Clustal W method, using default settings. The phylogenetic tree was constructed by the neighbor-joining method with MEGA version 4 software, and the reliabilities indicated at the branch nodes were evaluated using 1000 bootstrap replications.

Differential diagnosis:

1. *Cryptococcus neoformans*
2. *Blastomyces dermatitidis*
3. *Histoplasma capsulatum*
4. *Candida albicans*
5. *Coccidioides immitis,*
6. *Prototheca spp*

Diagnosis: Systemic *Cryptococcus neoformans* var*. grubii*, serotype A infection

Discussion:

The macroscopic examination of the multiple pinpoint to nodular mass was suggestive of a neoplastic process or infection diseases. In this case, primary diagnosis of a fungal infection depended on the histological and histochemistric findings. Differential diagnoses for the yeast-like organisms include *Blastomyces dermatitidis, Candida albicans*, *H. capsulatum*, *Coccidioides immitis*, *Prototheca* spp, and *C. neoformans* was the most possible aetiological agents, on the basis of their similarities in appearance in histological section. Special stains examined a yeast infection histologically and the carminophilic capsule was indicative of *C. neoformans*.

In the molecular level, two capsular gens—*CAP59* and *CAP64*—have been associated with virulence [7]. The molecular analysis of the *CAP59* gene could be useful for the differentiation of serotypes of *C. neoformans* and for an understanding of their phylogenetic relationships [10]. Percentage nucleotide sequence similarity of clinical isolate and other serotypes of cryptococcus strains were shown in below. The nucleotide sequence of clinical isolate was most similar to that of serotype A (99.6 % nucleotide similarity) and was similar to that of serotype AD (99.4 % nucleotide similarity). It was mildly different from that of serotype D (93.0 % nucleotide similarity) and those of other Cryptococcus species (serotype B and C) (89.9 % nucleotide similarity). In addition, the phylogenic analyses of samples belonged to the cluster of serotype A. The results of the molecular analysis revealed that the case was highly suspected infection by *Cryptococcus neoformans* var*. grubii*, serotype A.

Epidemiologic data have shown that *C. neoformans* preferentially affects immunosuppressed populations in humans and animals, but *C. gattii* generally occurs in apparently healthy hosts [2] [9] [11]. In animals, several authors have suggested that, in the cat, infection with FeLV or FIV might facilitate cryptococcal infections [1][5][12], while in the dog *C. neoformans* has seldom been associated with immunosuppressive factors [11]. In the present case, this animal showed

widespread dissemination of the fungal organisms throughout the body. However, a weak cell-mediated immune function was not improved in this case.

The exact mode of cryptococcal infection is unproven, but the most likely route is via inhalation of air-borne organisms, such as basidiospores or yeast cells desiccated by environmental exposure [6]. Poorly shrunken capsulated cryptococci that are small enough for alveolar deposition have been isolated from pigeon guano and soil. In dogs, inhalation appears to be the route of infection, and the primary site of disease is the nasal cavity [8]. In contrast to humans, cryptococcosis usually shows neurologic signs referable to meningoencephalitits, strong circumstantial evidence suggests that the disease starts in the lungs and subsequently spreads hematogenously via macrophages to the nervous system [13]. In cats, cryptococcal infection may spread from the nasal cavity by direct extension through the cribriform plate [1] or haematogenously to cause meningeoencephaltitis [7] [8][9]. Necropsy examination of the nasal cavity of this animal was not performed. However, as the results of gross and histopathologic examination in this case, olfactory bulb was severe involved. In addition, the retinal lesions associated with cryptococcosis, including granulomas and retinal detachment, can develop as a result of hematogenous spread of infection [4] or via local invasion from the meninges along the optic nerve [3]. In consequence, the present case of systemic cryptococcal infection that was demonstrated in mostly of all internal organs including brain and eye that may be extension of the infection from the meninges to the nervous tissue and whole body via a hematogenous route of this dog was possible.

Reference:

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12. Sorrel T.C., Ellis D.H. (1997), Ecology of Cryptococcus neoformans, Rev Iberoam Micol, Vol. 14, pp. 42-43.

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CASE HISTORY:

Signalment: Two 8-week-old LYD (weaned pigs)

Clinical history:
Affected animals were 8 weeks of age. Nervous signs took place progressively past two week on August, 2012 including convulsion and spasm. Part of pigs showed the swollen joints. The mortality was 5%.

Gross findings:
One of pigs had many wound scabs on the body surface. Carpal and tarsal joints were swollen, in which the synovial fluid was increased. The surface of the cerebrum and cerebellum were both cloudy. There was anteroventral bronchopneumonia with fibrinous pleural adhesion.

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CASE RESULT:

Histopathological finding:

The subacute fibrinopurulent meningitis with hyperemia were the main lesions. Acute purulent bronchopneumonia in the apical lobe and mild locally extensive interstitial pneumonia were also seen in the lungs. Lymphocyte depletion in lymph nodes and tonsil were observed.

Differential diagnosis:

1. Streptococcal infection
2. Water deprivation
3. Salmonllosis
4. Vitamin E and Selenium deficiency
5. Pseudorabies

Diagnosis: Suppurative meningitis caused by Streptococcus spp in pigs

Discussion:

Several streptococcal species can be found in tonsils, intestines, and genital tracts of clinically healthy pigs, and some of them are potential pathogen. Streptococcus suis has been reported in all countries where the swine industry is important, and for more than 15 years; in addition, S. suis is a zoonotic agent with severe consequences. Between 1983 and 1995, a total of 32 new serotypes were described, out of total number of 35 serotypes. Most S. suis organisms isolated from diseased pigs belong to a limited number of serotype, often those between 1 and 8. Although serotype 2 misolates predominate in most countries, the situation may be different depending on the geographical location. However, it is noteworthy that several serotypes may be present in the same animal, and isolation of multiple serotype also has to be taken into consideration in diseased animals.

Horizontal transmission seems to be significant especially in the presence of clinical signs, with a considerably higher number of bacteria in the environment that would increase transmission either by aerosol or direct contact. Aerosol transmission without nose-to-nose contact has been

demonstrated for S. suis serotype 2. Besides, S. suis also appear to be transmitted via fomites, especially feed troughs of piglets and sows. Moreover, flies could spread infection within farms and between farms. The importance of other animal species or birds as reservoir or vectors of infection has still to be determined.

Even when the pig carrier rate is near 100%, the incidence if the disease varies from period to period and is usually less than 5%; however, mortality rates can reach 20% without treatment. The earliest signs is usually a rise in rectal temperature to as high as 42.5℃. This may occur initially without any other obvious signs. It is accompanied by a detectable bacteremia or pronounced septicemia, and there is usually a fluctuating fever and variable degrees of inappetence, depression and shifting lameness during this period.

In peracute cases, pigs may be found dead with no premonitory signs. Meningitis is the most striking feature and the one on which a presumptive diagnosis is usually based and S. suis is often the only bacterial pathogen isolated from pigs with neurological lesions. Early nervous signs include incoordination and adoption of unusual stance, which soon progress to inability to stand, padding, opisthotonus, convulsions and nystagmus. In contrast to pigs with neurological sign, the pigs with pulmonary signs often show bronchopneumonia. It is indistinguishable from pasteurellosis and infection with other pyogenic bacteria, and Pasteruella multocida appeared to be associated with pulmonary infections with S. suis. Interstitial pneumonia, fibrinous or fibrinopurulent arthritis, peluritis, peritonitis and polyserositis are lesions secondary to septicemia; however, septicemia, arthritis and pneumonia are less remarkable manifestation of the disease. Significant microscopic lesions are usually limited to the brain, lung and joint. In addition to purulent bronchopneumonia and interstitial pneumonia, the predominant lesions are neutrophilic meningitis (meningoencephalits) and choroiditis with hyperemic meningeal blood vessel.

Most studies on S. suis virulence factors have been carried out with serotype 2 strains and researchs agree on the existence of virulent and avirulent strains of this serotype. The most important candidate in S. suis serotype 2 are the capsule polysaccharide (CPS), virulence-related proteins, such as the muramidase-released protein (MRP) and the extracellular factor (EF), the hemolysin or suilysin, and some adhesins. The CPS is an important antiphagocytic factor and these findings changed the studies on the pathogenesis of the meningitis. The MRP and EF proteins were originally associated with virulence; however, a certain association between the presence of the suilysin and virulence may be established since avirulent suilysin-positive strains have never been reported so far. The mechanism that enable S. suis to disseminated throughout the animal are not well understood. The bacterium could spread systemically from the nasopharynx, occasionally resulting in septicemia and death. Both palatine and pharyngeal tonsil are considered as possible portals of entry for S. suis. The most bacteria are extracellular and the number of monocytes containing bacteria in seotucemic pigs is low. Besides, the CPS would antiphagocytic properties to S. suis and it is possible that bacteria travel either free in circulation or even externally attached to monocytes. Bacteria can then reach the CNS via invading endothelial cells that form the brain blood

barrier. On the other hand, interactions of bacteria with polarized epithelial cells of choroid plexus cause disruption of the plexus brush border with fibrin and imflammatory cell exudates presenting in the ventricules which is the result of meningitis.

The choice of the best antibacterial agent against S. suis infections must be based on several criteria such as the susceptibility of the organism, the typer of infection and the mode of administration. In peracute forms of the disease, the response to antibiotic treatment can be poor and it is sometimes advisable to treat all the pigs in a pen when one is affected or found dead. It is important that treatment is continued for at least 5 days, by the way. Overcrowding, poor ventilation, excessive temperature fluctuation and mixing of pigs with an age spread of more than 2 weeks seem to be the most stress factors involved in the development of S. suis infection in susceptible pigs. Management practices such as all-in-all-out pig flow can help reduce the incidence of the disease. In addition, medicated early weaning and segregated early-weaning have been used to improve the health status of pigs and to eliminate some infectious organisms. Morever, using vaccines and producing maternal antibody may be useful, but difference in antibody levels among piglets could be attributed to difference in maternal antibody levels and/or in the rate of absorption of maternal antibody by the piglets. Finally, attempts to eradicate the infection have focused only on serotype 2, and only depopulation and restocking with clean pigs will ensure eradication of the infection even through this is not economic in most field.

Human S. suis infections, which serotype 2 is the most common cause of the disease, are most often reported from countries where pig-weaning is common and abattoir workers and pig breeders are easier to infect S. suis. Therefore, the infection of S. suis is generally an occupational disease. On the other hand, not only a significant number of housewives presumably infected as a result of contact with contaminated pork but also other individuals who were unaware of any exposure to pork would be infected. Meningitis and septicemia are the most common clinical manifestation of S. suis infection as same as pig. In additiona to headache, fever, vomiting and meningeal signs, one striking feature is subjective hearing loss. Perhapse some patients have skin findings, including petechiae, purpura and ecchymoses, all of which can be extensive and hemorrhagic bullae and skin necrosis. Antibiotic is the main treatment without delay for any other patient with suspected bacterial meningitis. For empirical treatment, S. suis is susceptible to penicillin, ceftriaxone and vancomycin.

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CASE HISTORY:

Signalment: 50-year-old man

Clinical history:
This 50-year-old man is a patient with a past history of hypertension and hyperthyroidism s/p I131 treatment. He had had suicide attempt with charcoal burning after taken hypnotics of unknown amount. He was found by his daughter and sent to NCKUH with CO toxicity. Brain CT revealed a frontal brain tumor with mass effect incidentally. He was transferred to our hospital.

Lab Data and Image Findings:
A. Lab Data: within normal limit
B. Pre- and post-contrast CT scan of the brain:
   A 6.2cm left parafalcine extraaxial mass with moderate contrast enhancement is noted, with extensive perifocal edema and mass effect causing midline shift, and subfalcine and descending transtentorial herniations, meningioma is favored. DDx hemangiopericytoma.
C. Pre- and post-contrast brain MRI:
   Meningioma in anterior falx with marked mass effect causing midline shift, subfalcine and transtentorial descending herniation, and marked perifocal edema. DDx: hemangiopericytoma, or other entities. Recommend clinical correlation.

Gross findings:
The specimen consisted of multiple pieces of brown tissue, measuring up to 4.5x3.5x3.5 cm. A piece of membrane-like tissue is seen, measuring 5x3x0.1 cm.

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CASE RESULT:

Histopathological finding:
Section shows epithelioid cells with eosinophilic cytoplasm and oval nuclei with focal whorling pattern and rare psammoma bodies. In many areas, the tumor is hypercellular with cells growing in a sheet-like architecture. Moderate to marked pleomorphism, macronucleoli and geographic necrosis are noted. There is very focal brain adhesion. However, finger-like protrusion into brain parenchyma is not seen. Focal areas with rhabdoid cells and rosettes are noted.

Immunohistochemistry:
The tumor cells are strongly positive for vimentin, show patchy positivity for EMA and PR, and are negative for desmin. Ki-67 labeling index is about 20%.

Differential Diagnosis:
1. meningioma, WHO grade 1
2. atypical meningioma, WHO grade 2
3. rhabdoid meningioma, WHO grade 3
4. hemangiopericytoma

Diagnosis: Atypical meningioma, WHO grade 2

Discussion:

The tumor is associated with thick, fibrous dura, suggesting that it is dural-based. Though fascicular arrangement is identified occasionally, lacking of typical slit-like (staghorn) vessels of hemangiopericytoma and focal typical meningothelial whorled appearance suggest meningioma. However, in contrast to benign meningioma, the tumor cells in most areas show hypercellularity, sheet-like growth pattern, focal areas of necrosis and cytologic atypia, high nuclear-to-cytoplasmic ratios, coarse chromatin, and prominent nucleoli. Immunohistochemically, the tumor cells are strongly positive for vimentin, show patchy positivity for EMA and PR, and are negative for desmin. Ki-67 labeling index is about 20%.

Based on these findings this tumor is best characterized as an atypical meningioma (WHO grade 2). Atypical meningiomas are tumors that show increased mitotic activity (4 or more mitosis per 10 HPF) or tumors that have 3 or more of the following features: increased cellularity, small cells with high N/C ratio, prominent nucleoli, sheet-like growth pattern, and necrosis. The current case

exhibits sheet-like patternless growth, hypercellularity, focal necrosis, cytologic atypia and increased proliferative activity. There are also numerous foci containing mostly discohesive rhabdoid cells with abundant pink cytoplasm containing globular perinuclear inclusions, eccentrically placed vesicular nuclei and prominent nucleoli. Also noted are rosette-like structures in a focal area. Rhabdoid morphology should constitute over half of the tumor before invoking a diagnosis of “rhabdoid meningioma, WHO grade 3”. In this case, these foci are quantitatively insufficient for a diagnosis of rhabdoid meningioma. The clinical significance of focal rosette features meningiomas remains unclear.

Meningiomas are most common in middle-aged and elderly patients. Overall there is an increased incidence of meningioma in females, whereas atypical and anaplastic meningiomas are more common in males. Tumor grades (WHO 1-3) correlate well with rate of recurrence. Approximately 17-20% benign (WHO grade1) meningiomas recur, whereas approximately 29-40% of atypical meningiomas will recur. The recurrence rate for anaplastic meningiomas (WHO grade 3) is 60-80%. Some authors suggest that while it is not possible to establish universal values for determining recurrence, Ki67 labeling indices above 5-10% may have increased risk for recurrence.

In summary, in our case, the morphological and immunohistochemical features are consistent with a diagnosis of atypical meningioma, WHO grade 2. However, the focal rhabdoid features and high Ki-67 index are worrisome for early anaplastic transformation. Therefore, close clinical follow-up is recommended to rule out a more aggressive biology than that of the average WHO grade II meningioma.

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CASE HISTORY:

Signalment: 65-year-old man

Clinical history:

In 2004, in the age of 62, this man had suffered from left chest pain for six months and visited 台中榮總 on Dec. 07. Chest X-ray film showed plueral effusion and a 3.7 cm mass in his left upper lobe(LUL) in the lung. On Dec. 26, 2004, he was diasgnosed lung adenocarcinoma in LUL, T4N3M0, stage IIIB. CT scan also showed multiple lymphadenopathies. In Jan., 2005, he started receiving chemotherapy of Taxotere and Cisplatin for 3 cycles, and in Feb., chest X-ray film showed a decrease in tumor size.

On Oct. 07, 2005, he visited hospital again for memory impairment, slow motion, apathy, and unsteady gait. Brain CT scan showed multiple metastases in the brain in left frontal lobe, right parietal lobe, and frontal area. He was carried out whole brain radiotherapy. On Jan. 09, 2006, brain CT scan showed right temporal lesion, and this time gamma knife radiosurgery was carried out. On May 15, 2006, gamma knife radiosurgery was carried out for right cerebellar, right temporal lobe, and right high occipital lobe metastases.

On May 06, 2007, he was admitted to 台中榮總 because of greenish sputum and intolerable pain over upper back and shoulder. Chest X-ray film showed marked pleural effusion. Respiratory failure developed on May 12 and his family signed do-not resuscitate(DNR). His condition got worse and expired on May 14.

Gross findings:

At autopsy, in the LUL of the lung, an obvious scar was found. In the coronal section of the brain along the precentral sulcus, two grayish plaque -like lesions were seen in the white matter, in the right internal capsule and the left precentral gyrus.

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CASE RESULT:

Histopathological finding:

Microscopically, the LUL of the lung showed large areas of scar tissues, with tumor cells along the border. An old tuberculosis scar was found, and epitheloid cells were seen, too. The tumor part was composed of two patterns of cells, acinar type and spindle type. Under cytokeratin stain, both types of cells were positive.

The scar-like lesion of the brain was microscopically an area of demyelination in the white matter, with numerous gitter cells surrounded . In addition, numerous hypertrophic astrocytes with prominent nucleolus, bright pinkish cytoplasm, and obvious foot processes were seen. In a few vessels, lymphocytes were seen to gather along the vascular endothelium.

Immunohistochemistry:

CD68 positive in demyelinated areas in the brain

CD3 positive along some vascular endothelium in the brain

Diagnosis: Gamma-knife-radiosurgery-related demyelination

Discussion:

Gamma knife radiosurgery(GKRS) is a technique invented by Lars Leksell for the non-invasive destruction of intracranial tissues. A gamma knife typically contains 201 cobalt-60 sources of approximately 30 curies, each placed in a circular array in a heavily shielded assembly. It is now applied to brain metastases more widely than whole brain radiotherapy(WBRT) because of its preciseness and less prominent adverse effect. Adverse effects of radiotherapy(WBRT and GKRS) appears microscopically as coagulative necrosis, demyelination, loss of oligodendrocyte, axonal loss, focal calcification, fibrillary gliosis, and scattered perivascular infiltrates of mononuclear cells. Our case presented demyelination, fibrillary gliosis, and mononuclear cell infiltration.

In this case, both WBRT and GKRS were carried out for brain metastases, and they are both possible causes of the pathologic changes mentioned above. However, we are more prefered that the pathological changes seen here were caused by GKRS. WBRT does not specifically locate tumor and causes damage to the whole radiated area, the brain in this case. Therefore, scar-like lesions may appear at any location in the brain radiated. In the gross and the microscopical finding, however, the scar-like lesions were located at the site where metastatic tumors were. Therefore, we came to the conclusion that the tumor-site matchable lesions were more possibly caused by GKRS

which can specify tumor size and location.

The GKRS decreases the densities of vessels in the brain, causing ischemia. Along with the direct damage of radiation to oligodendrocytes, GKRS causes oligodendrocyte depletion, which attracts gitter cells for phagocytosis. After being phagocytosed, myelin sheath of the nerves are lost, presenting a demyelination area microscopically. GKRS can also cause direct damage to endothelial cells, and T cells infiltrate vascular wall as a consequence. This pattern of vasculitis is called delayed radiation-induced vasculitits. Delayed radiation-induced vasculitits and demyelination both activates astrocytes, the fibroblast in the brain. Activated astrocytes, known as gemistocytes, proliferated, and previously scant cytoplasm under H&E stain becomes bright pink with prominent foot processes. Gemistocytes form glial scars, similar to fibrosis in peripheral tissues, and the process is called gliosis. Glial scars take place over originally functional neurons, causing several dysfunctions depending on the location of the scar; however, in our case, there were no recorded symptoms possibly caused by glial scars.

In addition, in the lung we found that the adenocarcinoma in the LUL was scar cancer. Scar cancer describes a cancer which is associated with a pre-existing scar, wounds, or inflammation. Tuberculosis, infarcts, abscess cavities are some of the common causes of the scar. In our case, an old TB scar could be obviously observed in the collagen-rich scar area, indicating that despite of no known past history of the 65-year-old man to had been suffering from tuberculosis, the lung adenocarcinoma was highly suspected to be related to healed tuberculosis scars. The tumor cells in this case, as mentioned earlier, were in two patterns, the acinar and the spindle type. The acinar type was the classic adenocarcinoma pattern, which was of epithelial origin; the spindle type, however, could be of epithelial or mesenchymal origin. To confirm the origin of the spindle type tumor cells, a cytokeratin stain was performed. Under cytokeratin stain, both acinar and spindle type cells were positive, indicating that they were both of epithelial origin. This pattern of adenocarcinoma is called “sarcomatoid carcinoma.”

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CASE HISTORY:

Signalment: 1-year-old, male, dairy goat, Alpine type, Caprine

Clinical history:

A dairy goat farm rear about 700 goats including ewes, rams, and weaning lambs. In August 7th, 2012, few weaning lambs became ill after feeding the spoiled-silage (pH 7-8), edamame of improper storage manner. In August 9th, more adult milking ewes and rams affected after the owner transferred the remainder of edamame to feed these animals. About 60 dairy goats became ill and 58 goats died totally until September 20th. The morbidity and mortality were about 60/700% and 58/700%, respectively. Clinical signs include dysphagia, unable to eat and drooling of saliva with undigested foods inside the mouth, head tilt, torticollis, legs weakness and recumbency. One male, alpine dairy goat, about 1-year-old, was referred to our labs for further definitive diagnosis. Stop feeding spoiled-silage, farm disinfection and antibiotic therapy (amoxicillin and gentamicin), the occurrence of diseased goats of the farm had improved.

Gross findings:

At necropsy, the mild white cloudiness of cerebral and cerebellar sulci and brain stem of the dairy goat were found. Focal haemorrhage was also noticed.

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CASE RESULT:

Histopathological finding:

Brain stem: The microscopic lesions consisted of multifocal to coalescing area of necrosis, with intense infiltration of neutrophils and macrophages (microabscesses), multifocal microgliosis, myelin degeneration, neuron degeneration and severe perivascular cuffing with macrophages and lymphocytes in medulla oblongata and pons. The leptomeninge of medulla also was infiltrated with marked lymphocytes, macrophages, and few neutrophils.

Cerebellum: The leptomeninge of cerebellar sulci was infiltrated with mild to moderate amount of lymphocytes, macrophages, plasma cells and few neutrophils. Focal meningeal blood vessels were highly congested or haemorrhagic.

Cerebrum: The leptomeninge of cerebral sulci was infiltrated with mild amount of lymphocytes, macrophages, plasma cells and neutrophils.

Anterior cervical spinal cord: The grey matter revealed multofocal microgiiosis, microabscesses (neutrophils predominated with a few lymphocytes, and macrophages), myelin degeneration, neuron degeneration and marked perivascular cuffing with lymphocytes, macrophages and few neutrophils. Few lymphocytes, macrophages and neutrophils scattered on the central canal and its adjacent foci of gray matter. Focal microabscess was also found on white matter.

Laboratory results:

1. Gram stain of smears: The gram-positive, pleomorphic rods bacilli with palisade appearance in group of two or three or scattered singly, were seen on the smears of the brain stem.
2. Diff-Quick stain of smears: Few neutrophils were found on the smear of leptomeninge and choroid plexus.
3. Bacterial isolation: Tissue samples from affected brain stem were inoculated onto the blood agar and Chromogenic listeria selective agar. After 24 hours incubation, small round grayish-white dew drop like colonies with narrow zones of beta-haemolysis and small round blue colonies with opaque white halo around the colonies were observed, respectively at 370C. Small pieces of medulla oblongata were homogenized and a 10 fold dilution suspension was made in brain heart infusion broth. The broth suspension was placed in the refrigerator at 40C for one week and subcultured onto the blood agar. After 24 hours incubation, small round

grayish-white dew drop like colonies with narrow zones of beta-haemolysis appeared on the blood agar. The biochemical and other tests of the Listeria spp were as followed: positive reaction for catalase, esculin hydrolysis, VP, umbrella motility, rhamnose fermentation, CAMP test positive with Staphylococcus aureus, negative reaction for nitrate reduction, oxidase, citrate, ornithine, urea, IPA, H2S, Indole, gas formation. API 20-Strep (Biomerieux co.) identification systems identified the colonies, Listeria spp. Chromogenic listeria selective agar and other biochemical tests identified the bacterial colonies, Listeria monocytogenes.

4. Drug sensitivity tests: The isolates of Listeria monocytogenes were susceptible to Amoxicillin, Ampicillin, Gentamicin, and Erythromycin; intermediate to Amikacin, Cephalothin, and Florophenicol; but resistant to Doxycycline, OTC, Ceftiofur, Penicillin G, Kanamycin, Novobiocin, Enrofloxacin, and Clindamycin.

Morphologic diagnosis:

1. Brain stem: Suppurative rhombencephalitis, multifocal to coalescing, acute to subacute, severe, with myelin degeneration and leptomeningitis, Alpine type, Caprine
2. Cerebellum, cerebrum: Suppurative leptomeningitis, diffuse, acute to subacute, mild to moderate, with focal cerebellar haemorrhage, Alpine type, Caprine
3. Anterior portion of cervical spinal cord: Suppurative myelitis, multifocal, acute to subacute, moderate, with ependymitis, and myelin degeneration, Alpine type, Caprine

Differential Diagnosis:

1. Rabies
2. Polioencephalomalacia
3. Lead intoxication
4. Caprine arthritis and encephalitis (CAE)
5. Thrombotic meningoencephalitis
6. Nervous ketosis
7. Bacterial meningitis
8. Pregenancy toxiemia
9. Scrapie or Bovine spongiforme encephalopathy

Diagnosis: Listeric encephalitis in dairy goats

Discussion:

Listeric encephalitis in goat is caused by Listeria monocytogenes (LM). This bacterial specie was first described by Murray et al. in 1926 who isolated the bacterium from the livers of clinically sick rabbits and guinea pigs. Since then listeriosis has been recognized as a disease of mammals and birds, and as a potential zoonosis. During the 1980s several large outbreaks among humans led to

the recognition of Listeria monocytogenes as an important foodborne pathogen, shifting the focus from a veterinary to a human public health problem. The genus Listeria includes eight species, namely, Listeria monocytogenes, L. ivannovii, L. innocua, L. welshmeri, L.seeligeri, L. grayi, L.marthii, L. rocourtiae. Two pathogenic species exist in genus Listeria, Listeria monocytogenes and L. ivannovii. Listeria genus contains 16 serovars. Most clinical infections are caused by Listeria monocytogenes serovar 1⁄2a, 1⁄2b and 4b. Both LM and L. ivannovii hold a group of virulence genes such as the positive regulatory factor A, internalins, hemolysin, phospholipase, a hexose phosphate transporter and others, which enable them to replicate within and spread between eukaryotic cells. Infection is truly wide spread having been recorded in more than forty species of wild and domesticated animals and in countries in over six continents. Listeria monocytogenes causes diseases in human and other animals. L. ivannovii causes diseases almost exclusively in ruminants. Listeria spp. are Gram-positive, facultative, anaerobic, non-sporulating rods which have no capsule and are motile at 10-250C. Listeria have been isolated from a variety of origins including soil, water, plants, feces, decaying vegetables, meat, seafood, dairy products and asymptomatic human and animal carriers. The natural habitat of Listeria is decaying plant material, where they live as saprophytes.

Listeria monocytogenes survives for month to years in soil, feces and contaminated feed and is able to grow at broad ranges of pH (pH4.5-9) and temperate (0-450C), including refrigeration temperatures. Listerosis occurs seasonally among ruminants, with the highest incidence in winter and early spring, and appears strongly associated with feeding of improperly fermented silage with pH greater than 5.5, but sources of infection also include other spoiled forages, such as the bottom of round bales and rotten vegetation. Goat consuming woody browse also may be at increased risk for the disease.

Listeriosis represents one of the most common etiologies for encephalitis among adult ruminants. Ruminants affected by encephalitis generally showed marked neurological symptoms including ataxia, circling, opisthotonus, and paralysis of the cranial nerves, combined with hyperthermia, anorexia and depression. Encephalitis is the most common clinical manifestation of listeriosis in ruminants. Although Listeria monocytogenes causes several other syndromes in ruminants including abortion, septicemia, mastitis, and possible ophthalmitis, these do not usually accompany the encephalitic syndrome. Listeriosis generally exhibits a single clinical manifestation.

It has been suggested that Listeria monocytogene may cause rhombenencephalitis in ruminants through centripetal migration along cranial nerves, particularly the trigeminal nerve, followed by multiplication in pons and medulla oblongata. Consistent with this hypothesis, change in dentation and other lesions in the oral cavity as well as on the lips, nostrils or conjunctiva appear to be predisposing factors for listeriosis in ruminants. Typically, histopathological findings in ruminants with rhombencephalitis are unilateral, located in the brain stem, particularly pons and medulla oblongata, and include perivascular cuffing and multifocal microabscesses, generally without involvement of meninges or choroid plexus. These lesions clearly resemble those observed in human affected by rhombencephalitis. The means by which LM invades the brain have been

subject of speculation for decades in both human and veterinary medicine. From the pathological point of view, the variation of neuropathological patterns that are associated with CNS infection suggests strongly that the pathogen is able to invade the brain by both hematogenous spread or by migration along axons. However, the pathogenesis of both major manifestations of CNS infection-meningitis and rhombencephalitis-is largely unknown. Septicemic cases among ruminants are characterized by multifocal necrosis of the liver, spleen, and potentially other organs. Placentitis and endometritis are typical findings associated with abortions. A presumptive diagnosis of encephalitic listeriosis can be made on the basis of clinical nervous signs. The most useful antemortem diagnostic test for encephalitic listeriosis is CSF analysis. A definitive diagnosis of encephalitic listeriosis includes characteristic histopathology (rhombencephalitis and minigoencephalitis), bacterial culture and identification, IHC, PCR, ribotyping, and other molecular techniques.

In this present case, the main pathological lesions of the, one year old, male dairy goat included suppurative rhombencephalitis, meningitis, and cervical myelitis, which are the characteristic lesions of listeric encephalitis. These lesions involved in brain stem (pons and medulla oblongata), leptomeninge, and anterior portion of cervical spinal cord are similar to the ones of published papers. LM were cultured and identified by blood agar, Chromogenic listeria selective agar and other biochemical test from affected brain stem. The pathogenesis of the listeric encephalitis, whether is from the route of the axonal migration or hematogenous route, still needs to be elucidated. The morbidity and fatality are around 8.5% and 96%, respectively. The fatality is high. Feeding the improper storage spoiled-silage (pH 7-8), edamame, in this case was highly suspected of the origin of contamination because the LM grew at pH environment above 5-5.5 and LM was also cultured from the spoiled-silage (edamame) by Chromogenic listeria selective agar later. Weaning lambs, adult ewes and rams of this dairy farm which fed with contaminated-edamame were all susceptible. Abortion of ewes was not noticed by the owner. Only encephalitic syndromes including dullness, fever, dysphagia, drooling of saliva with undigested foods inside the mouth, head tilt, torticollis, legs weakness and recumbency which related to multiple cranial nerve deficits, meningitis and rhombencephalitis were found during Aug. to Sept., 2012. After stop feeding the spoiled silage, edamame, disinfection and proper antibiotic treatment (Amoxicillin and Gentamicin), the clinical nervous signs subsided.

Listeria monocytogene has been linked to sporadic episodes as well as large outbreak of human listeriosis cases occurs following consumption of contaminative food. Although relatively rare (The annual incidence rate ranges from 1 to 10 cases per million), listeriosis has an important impact on public health given that it is responsible for the highest hospitalization and mortality rates among foodborne infection and LM is a common food contaminant. The case fatality rate ranges from 24% to 52% despite adequate antimicrobial treatment. LM has the propensity to cause disease in well-defined risk group including pregnant women, individuals at the extremes of age (newborns or elderly peoples), and patients with underlying conditions including malignancies, diabetes mellitus,

alcoholism, chronic hepatic and renal diseases, organ transplantation, autoimmune diseases, AIDS, immunosuppressive treatments (steroid). However, listeriosis can occur in otherwise healthy individuals. The infection manifests in various syndromes, ranging from middle febrile gastroenteritis to serious invasive disease including septicemia, abortion, and CNS disease. In addition to these syndromes, listeriosis may present as a local infection including dermatitis, endocarditis, pericarditis, pneumonia, peritonitis, arthritis, hepatitis, and endophthalmitis. Infection of nonpregnant adults leads to bacteremia and CNS disease in most cases, and listeriosis is nowadays the second to fifth most common etiology of human bacterial meningitis in the Western hemisphere. The CNS form in human generally develops as a diffuse meningitis/meningoencephalitis, usually associated with bacteremia. Meningitis prevails in neonate, elderly people and patients with immunosuppressive disorders or other concurrent conditions. Less common CNS manifestations include abscesses in the cerebrum or cerebellum, and in up to 24% of patient's encephalitis targeting the brainstem (rhomencephalitis), but latter is probably under-recognized. Rhomencephalitis has been first described in 1957 by Eck as an unusual form of listeriosis. In contrast to meningitis, it appears to occur predominantly in previously healthy patients without any predisposing conditions.

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CASE HISTORY:

Signalment: 3 years old Chihuahua, male, without castration

Clinical History: Consistent general seizure

Clinical Pathology:
RBC: 4.37×10^6/μL (5.5~8.3×10^6/μL), Hb: 11.6 gm/dL (13.0-19.0 gm/dL), PCV: 31.4% (37~57%), MCV: 71.9 fL(62-77 fL), MCHC:36.9 g/dL (32-36 g/dl), WBC: 22000/μL (6000-17000/μL), Plt: 14.4×10^4/dL ($16\text{-}50\times10^4$/dL), Lymphocyte: 1100(900-4800/μL), Neutrophil: 18480 (3000-11400/μL), Monocyte: 2200(100-1400/μL), Eosinophils:220(100-750/μL), Fibrinogen: 0.8 g/dL (0.15-0.5 g/dL), Total protein: 4.4 g/dL (6.0-8.0 g/dL), Toxic Change(-), Creatinine: 1.0 mg/dL (0.5-1.5 mg/dL), BUN: 12.9 mg/dL(9.2-29.2 mg/dL), T.Bil: 0.6 mg/dL(0.1-0.5 mg/dL), ALT: 102 U/L (15-90U/L), ALP:163 U/L(10-110 U/L), AST: 124 U/L(17-44 U/L), NH_3: 123 μg/dL(16-75 μg/dL), CK: 793 U/L(49-166 U/L), Na: 137.6 mmol/L(141-152 mmol/L)

Gross Findings:
The cerebrum gyrus, 3rd ventricle, left ventricle, cerebral aqueduct and 4th ventricle, are dilated and sulcus is shallow. Cerebellum was asymmetric, left part of cerebellum showed flattened shape(1*0.5*0.5 cm) with focal, mild menigial hemorrhage. A red, small hematoma nodule(0.3*0.2*0.2 cm), around the 4th ventricle, attached on oblongata but beneath the cerebellum.

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CASE RESULT:

Histopathologic Findings:

The cerebrum and cerebellum medulla showed severe demyelination, with distinct neuron degeneration and chronic inflammatory cells infiltrated around the vessel and meniges; and predominantly active macrophage, with few plasma cell and lymphocyte were noted. The small part of cerebrum be seen mild gliosis

Differential diagnosis:

1. viral encephalitis, ex: canine distemper virus
2. CNS lymphoid or histiocytic neoplasia
3. Protozoal encephalomyelitides, ex: toxoplasmosis, neosporosis
4. Vaccine-relative allergic encephalitis
5. Granulomatous meningoencephalomyelitis, GME
6. Pug Dog encephalitis, PDE
7. Steroid-responsive meningoencephalitis

Diagnosis: Granulomatous meningoencephalomyelitis

Discussion:

Granulomatous meningoencephalitis (GME) is a common neurological disease of central nerve system (CNS) in dogs, similar in frequency to distemper virus encephalitis, steroidresponsive meningitis-arteritis and protozoal encephalitis, and has occasionally been reported in cats, horses and cattle. GME is characterised by focal or disseminated granulomatous lesions within the brain and/or spinal cord, non-suppurative meningitis and perivascular mononuclear cuffing. The aetiology of the disease remains unknown, although an immune-mediated cause is suspected. The cause of GME is only known to be noninfectious and is considered at this time to be idiopathic. Because

lesions resemble those seen in allergic meningoencephalitis, GME is thought to have an immune-mediated cause, but it is also thought that the disease may be based on an abnormal response to an infectious agent. Early reports quoted a variable incidence of between 5% and 25% of all CNS disorders in dogs more recent prevalence information is unavailable.

Histologically, GME lesions occur predominantly within the white matter of the CNS, characterised by dense aggregates of inflammatory cells arranged in whorling patterns around blood vessels. These perivascular cuffs comprise principally macrophages along with varying numbers of lymphocytes, monocytes, plasma cells, and lesser numbers of neutrophils and multinucleate giant cells. Lymphocytes and macrophages represent the dominant cell types in the lesions; however, marked variation is described: some granulomas being principally lymphoid, some not perivascular, and some with eccentric development of a granuloma from an existing perivascular cuff. Typically, lesions are widely distributed within the CNS but they occur most commonly within the white matter of the cerebrum, cerebellum, caudal brainstem or cervical spinal cord. Comparable lesions may also be observed in grey matter and there may be lesions involving the vasculature of leptomeninges or choroid plexus.

Three forms of GME have been described, based primarily on the presenting clinical signs, namely: focal, disseminated(multifocal) and ocular. However, in both focal and disseminated forms, the lesions are usually widely scattered throughout the CNS.

Disseminated:

This is a diffuse disease throughout the CNS. It was previously known as inflammatory reticulosis. There is an accumulation of mononuclear cells and neutrophils around the blood vessels (perivascular) of the CNS. Meningitis is seen with this form of GME and causes fever and neck pain. It has an acute progression over a few weeks. Symptoms include incoordination, nystagmus, head tilt, seizures, and depression.

Focal: The disease presents as a granuloma, which mimics a tumor, like lymphoma. It usually is found in the cerebrum or cerebellopontine angle.

Ocular: This is an uncommon form of GME and is characterized by sudden blindness caused by optic neuritis. The disease is bilateral. Ocular GME is considered to be an extension of CNS disease. The blood vessels of the posterior segment of the eye and anterior uvea have the same infiltrates of inflammatory cells as the intracranial vessels. Uveitis, retinal detachment, and secondary glaucoma may be seen.

As is the case with the majority of CNS diseases, the clinical signs observed in an animal with GME primarily reflect the location of the inflammatory lesions within the CNS rather than being specific for the disease itself. Disseminated form accounts for approximately 50% of the GME cases and has generally been accepted to occur with acute onset. The focal form of GME is characterised by signs attributable to a single space-occupying lesion. The more commonly reported signs reflect lesions within the cerebrum and brainstem. Focal GME also accounts for approximately 50% of the

presentations and, typically, it has been associated with a slower onset, e.g., three to six months. Despite this historical perception that the disseminated form has an acute onset and the focal form has a more chronic presentation, there is considerable variability.

The disease can be diagnosed definitively only by biopsy or postmortem, but a tentative clinical diagnosis can be made in vivo from the animal's history, clinical signs such as pyrexia and neck pain, neurological signs and an analysis of cerebrospinal fluid (CSF). Whilst CSF analysis is the mainstay of diagnosis, considerable variation in the findings may be encountered. More recently, computed tomography (CT) and magnetic resonance imaging (MRI) have been applied to the diagnosis of GME. However, of the few reports of MRI and CT scanning of GME lesions, most have yielded evidence of space-occupying lesions that cannot be definitively differentiated from neoplastic lesions. Brain biopsy is required to make a definitive antemortem diagnosis of GME and, in particular, to differentiate focal GME lesions from neoplastic disease.

Pug Dog encephalitis (PDE) is an idiopathic inflammatory disease primarily affecting the prosencephalon (forebrain and thalamus). It is also known as necrotizing meningoencephalitis. The disease may be inherited in Pugs and Maltese and has been diagnosed in other breeds as well, like Yorkies and Chihuahuas. It differs in pathology from GME by more tissue breakdown and increased eosinophils. CSF analysis is also unique among inflammatory CNS diseases in dogs in that the cells are predominately lymphocytes instead of a mixed population of mononuclear cells. In Maltese and Pugs there is extensive necrosis and inflammation of the gray matter of the cerebrum and subcortical white matter. The most common early symptoms are related to forebrain disease and include seizures and dementia, and later circling, head tilt, and blindness with normal pupillary light reflexs may be seen.

GME has a poor prognosis. Most studies offer the generalisations that dogs with multifocal disease typically have a short survival and dogs with focal disease usually have a longer survival. However, large prospective studies monitoring clinical responses to the newer treatment modalities are lacking and are greatly needed to allow an accurate prognosis to be given.

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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、　其他有關比較病埋學術發展之事項。

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

第二章　會員

第六條　本會會員申請資格如下：

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

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

三、　贊助會員：贊助本會工作之團體或個人。

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

前項一、二、三項會員申請時應填具入會申請書，經一般會員二人

之推薦，經理事會通過，並繳納會費。學生會員身份改變成一般會員時，得再補繳一般會員入會費之差額後，即成為一般會員，榮譽會員免繳入會費與常年會費。

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

第八條　會員有遵守本會章程、決議及繳納會費之義務。

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

第十條　會員喪失會員資格或經會員大會決議除名者，即為出會。

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

第三章　組織及職員

第十二條　本會以會員大會為最高權力機構。

第十三條　會員大會之職權如下：

一、　訂定與變更章程。

二、　選舉及罷免理事、監事。

三、　議決入會費、常年會費、事業費及會員捐款之方式。

四、　議決年度工作計畫、報告、預算及決算。

五、　議決會員之除名處置。

六、　議決財產之處分。

七、　議決本會之解散。

八、　議決與會員權利義務有關之其他重大事項。

前項第八款重大事項之範圍由理事會訂定之。

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

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

本屆理事會得提出下屆理事及監事候選人參考名單。

第十五條　理事會之職權如下：

一、　審定會員之資格。

二、　選舉及罷免常務理事及理事長。

三、　議決理事、常務理事及理事長之辭職。

四、　聘免工作人員。

五、　擬訂年度工作計畫、報告、預算及決算。

六、　其他應執行事項。

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

理事長對內綜理監督會議，對外代表本會，並擔任會員大會、理事會主席。

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

理事長或常務理事出缺時，應於一個月內補選之。

第十七條　監事會之職權如左：

一、監察理事會工作之執行。

二、審核年度決算。

三、選舉及罷免常務監事。

四、議決監事及常務監事之辭職。

五、其他應監察事項。

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

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

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

第二十條　理事、監事有下列情事之一者，應即解任：

一、喪失會員資格。

二、因故辭職經理事會或監事會決議通過者。

三、被罷免或撤免者。

四、受停權處分期間逾任期二分之一者。

第二十一條　本會置祕書長一人，承理事長之命處理本會事務，令置其他工作人員若干人，由理事長提名經理事會通過後聘免之，並報主管機關備查。但祕書長之解聘應先報主管機關核備。

前項工作人員不得由選任之職員（理監事）擔任。

工作人員權責及分層負責事項由理事會令另定之。

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

第二十三條　本會得由理事會聘請無給顧問若干人，其聘期與理事、監事之任期同。

第四章　會議

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

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

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

第二十七條　理事會及監事會至少每六個月各舉行會議一次，必要時得召開聯席會議或臨時會議。

前項會議召集時除臨時會議外。應於七日以以書面通知，會議之決議各以理事、監事過半數之出席，出席人較多數之同意行之。

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

第五章　　經費及會計

第二十九條　本會經費來源如下：

一、入會費：一般會員新台幣壹仟元，學生會員壹佰元，贊助會員伍仟元，於入會時繳納。

二、常年會費：一般會員新台幣五佰元，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六屆理監事名單簡歷冊								
職別	姓名	性別	出生年月日	學歷	經歷	現任本職	電話	傳真
理事長	施洽雯	男	46/08/30	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	039-543131-2716	039-551543
常務理事	呂福江	男	37/11/21	美國漢尼門大學病理學博士	國防醫學院病理學研究所所長	耕莘醫院病理部主任	02-22193391 ext 65236 0968-666741	02-2193506
常務理事	許永祥	男	48/10/30	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	03-8565301-2197	03-8574265
常務理事	張俊梁	男	45/5/6	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	國軍桃園總醫院病理檢驗部主任	02-2303-2209 03-4799595 ext 325570	02-2303-5192
常務理事	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	中興大學獸醫病理學研究所教授	04-22840894 ext406	04-22862073
理事	劉振軒	男	42/10/9	美國加州大學戴維斯校區比較病理學博士	台灣養豬科學研究所主任	國立台灣大學獸醫專業學院院長	02-33663760	02-23633289
理事	祝志平	男	46/02/25	台大病理研究所碩士	台北醫學院講師	高雄醫學大學病理科主治醫師	07-3121101 ext 7081~7085	039-572916
理事	李進成	男	49/06/06	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	02-28389306	02-28389306
理事	陳三多	男	40/08/11	比利時魯汶大學博士	中興大學獸醫系教授	中興大學獸醫病理研究所教授	04-22840368 ext 16	04-22853552
理事	張文發	男				國立中興大學獸醫學院 動物疾病診斷中心副主任		
理事	張聰洲	男	41/11/29	國立中興大學獸研所碩士班	國立屏東技術學院助教	國立屏東科技大學副教授	06-2333529	08-7740295
理事	賴銘淙	男	47/10/14	清華大學生命科學院博士	華濟醫院病理科主任	彰濱秀傳紀念醫院病理科主任	04-3250487	
理事	蔡睦宗	男	49/10/25	國立台灣大學獸醫學系公共衛生組碩士	台灣養豬科學研究所比較醫學系約聘技術員	屏東縣家畜疾病防治所技士	08-7224109	08-7224432
理事	陳憲全	男	25/5/18	日本麻布大學獸醫學研究科博士	US Veterinary Medical Officer, USDA/AFIS Philadelphia District Guloff Station, Elisabethtown, PA, USA	玉樹生技病理顧問有限公司首席獸醫病理學家/台灣動物科技研究所顧問	02-27832557 037-585875	037-585850
理事	朱旃億	男		國立台灣大學醫學系		天主教聖馬爾定醫院病理科主任	05-2756000 0920138915	
常務監事	江蓉華	男		國防醫學院醫學士	國軍花蓮總醫院病理部主任	耕莘醫院組織病理科主任	02-22193391	
監事	林永和	男	46/02/24	台大病理研究所	台北醫學院病理科講師	台北醫學院病理科講師	02-27361661 ext 641	02-23770054
監事	梁鍾鼎	男	51/01/25	台灣大學獸醫學研究所博士班	國家實驗動物中心副研究員	國家實驗動物中心首席獸醫師	02-2789-5569	02-27895588
監事	阮正雄	男	30/05/28	日本國立岡山大學 大學院醫齒藥總合研究科 博士	1. 台北市立婦幼綜合醫院病理科主任及婦產科主治醫師 2. 台北醫學大學副教授兼細胞學中心主任 3. 高雄市防癌篩檢中心細胞學主任	童綜合醫院婦產科及病理科主治醫師	0939-665921 02-2362-2656	02-23622656 04-26581919 轉4320 (辦公室)

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 NTU Vet Med Digital Pathology Lab web site at http://140.112.96.83:82/CSCP/ with your web browser.

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

4. Choose a Comparative Pathology meeting (e.g. 52nd CSCP)

5. Pick any case you'd like to read (e.g. case365-372)

中華民國比較病理學會
第一次至第五十六次比較病理學研討會病例分類一覽表

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

腫瘤	72.	Reticulum cell sarcoma	Mouse	國家實驗動物繁殖及研究中心
	73.	Hepatocellular carcinoma	Human	新光吳火獅紀念醫院
	74.	Hepatocellular carcinoma induced by aflatoxin B1	Wistar strain rats	台灣省農業藥物毒物試驗所
	81.	Angiomyolipoma	Human	羅東博愛醫院
	82.	Inverted papilloma of prostatic urethra	Human	省立新竹醫院
	84.	Nephrogenic adenoma	Human	國泰醫院
	86.	Multiple myeloma with systemic amyloidosis	Human	佛教慈濟綜合醫院
	87.	Squamous cell carcinoma of renal pelvis and calyces with extension to the ureter	Human	台北病理中心
	88.	Fibroepithelial polyp of the ureter	Human	台北耕莘醫院
	90.	Clear cell sarcoma of kidney	Human	台北醫學院
	93.	Mammary gland adenocarcinoma, complex type , with chondromucinous differentiation	Dog	台灣大學獸醫學系
	94.	1. Breast, left, modified radical mastectomy, showing papillary carcinoma, invasive 2. Nipple, left, modified radical mastectomy, papillary carcinoma, invasive 3. Lymph node, axillary, left, lymphadenectomy, palillary carcinoma, metaststic	Human	羅東聖母醫院
	95.	Transmissible venereal tumor	Dog	中興大學獸醫學系
	96.	Malignant lymphoma, large cell type, diffuse, B-cell phenotype	Human	彰化基督教醫院
	97.	Carcinosarcomas	Tiger	台灣養豬科學研究所
	98.	Mucinous carcinoma with intraductal carcinoma	Human	省立豐原醫院
	99.	Mammary gland adenocarcinoma, type B, with pulmonary metastasis, BALB/cBYJ mouse	Mouse	國家實驗動物繁殖及研究中心
	100.	Malignant fibrous histiocytoma and paraffinoma	Human	中國醫藥學院
	102.	Pleomorphic adenoma (benign mixed	Human	佛教慈濟綜合醫院

		tumor)		
腫 瘤	103.	Atypical central neurocytoma	Human	新光吳火獅紀念醫院
	104.	Cardiac schwannoma	SD rat	國家實驗動物繁殖及研究中心
	109.	Desmoplastic infantile ganglioglioma	Human	高雄醫學院
	107.	1.Primary cerebral malignant lymphoma 2.Acquired immune deficiency syndrome	Human	台北市立仁愛醫院
	111.	Schwannoma	Human	三軍總醫院
	114.	Osteosarcoma	Dog	美國紐約動物醫學中心
	115.	Mixed germ-cell stromal tumor, mixed sertoli cell and seminoma-like cell tumor	Dog	美國紐約動物醫學中心
	116.	Krukenberg's Tumor	Human	台北病理中心
	117.	Primary insular carcinoid tumor arising from cystic teratoma of ovary.	Human	花蓮慈濟綜合醫院
	119.	Polypoid adenomyoma	Human	大甲李綜合醫院
	120.	Gonadal stromal tumor	Human	耕莘醫院
	122.	Gestational choriocarcinoma	Human	彰化基督教醫院
	123.	Ovarian granulosa cell tumor	Horse	中興大學獸醫學系
	129.	Kaposi's sarcoma	Human	華濟醫院
	131.	Basal cell carcinoma (BCC)	Human	羅東聖母醫院
	132.	Transmissible venereal tumor	Dog	臺灣大學獸醫學系
	137	Canine Glioblastoma Multiforme in Cerebellopontine Angle	Dog	中興大學獸醫病理研究所
	143	Osteosarcoma associated with metallic implants	Dog	紐約動物醫學中心
	144	Radiation-induced osteogenic sarcoma	Human	花蓮慈濟綜合醫院
	145	Osteosarcoma, osteogenic	Dog	臺灣大學獸醫學系
	146	Pleomorphic rhabdomyosarcoma	Human	行政院衛生署新竹醫院
	147	Papillary Mesothelioma of pericardium	Leopard	屏東科大學獸醫學系
	148	Cystic ameloblastoma	Human	台北醫學院
	149	Giant cell tumor of bone	Canine	中興大學獸醫學院
	150	Desmoplastic small round cell tumor (DSRCT)	Human	華濟醫院
	152	Hepatocellular carcinoma	Human	羅東聖母醫院
	158	Hemangiopericytoma	Human	羅東聖母醫院

腫瘤	160	Cardiac fibroma	Human	高雄醫學大學病理學科
	166	Nephroblastoma	Rabbit	紐約動物醫學中心
	168	Nephroblastoma	Pig	台灣動物科技研究所
	169	Nephroblastoma with rhabdomyoblastic differentiation	Human	高雄醫學大學病理科
	172	Spindle cell sarcoma	Human	羅東聖母醫院
	174	Juxtaglomerular cell tumor	Human	新光醫院病理檢驗科
	190	Angiosarcoma	Human	高雄醫學大學病理學科
	192	Cardiac myxoma	Human	彰化基督教醫院病理科
	194	Kasabach-Merrit syndrome	Human	慈濟醫院病理科
	195	Metastatic hepatocellular carcinoma, right atrium	Human	新光醫院病理科
	197	Papillary fibroelastoma of aortic valve	Human	新光醫院病理科
	198	Extraplacental chorioangioma	Human	耕莘醫院病理科
	208	Granulocytic sarcoma (Chloroma) of uterine cervix	Human	高雄醫學大學病理學科
	210	Primary non-Hodgkin’s lymphoma of bone, diffuse large B cell, right humerus	Lymphoma	彰化基督教醫院病理科
	213	Lymphoma, multi-centric type	Dog	中興大學獸醫系
	214	CD30 (Ki-1)-postitive anaplastic large cell lymphoma (ALCL)	Human	新光醫院病理科
	215	Lymphoma, mixed type	Koala	台灣大學獸醫學系
	217	Mucosal associated lymphoid tissue (MALT) lymphoma, small intestine	Cat	臺灣大學獸醫學研究所
	218	Nasal type NK/T cell lymphoma	Human	高雄醫學大學病理科
	222	Acquired immunodeficiency syndrome (AIDS)with disseminated Kaposi’s sarcoma	Human	慈濟醫院病理科
	224	Epithelioid sarcoma	Human	彰化基督教醫院病理科
	226	Cutaneous B cell lymphoma , eyelid , bilateral	Human	羅東聖母醫院病理科
	227	Extramammary Paget’s disease (EMPD) of the scrotum	Human	萬芳北醫皮膚科,病理科
	228	Skin, back, excision, CD30+diffuse large B cell lymphoma, Soft tissue, leg , side not stated, excision, vascular leiomyoma	Human	高雄醫學大學附設醫院病理科
	231	Malignant melanoma, metastasis to	Human	財團法人天主教耕莘醫

腫瘤		intra-abdominal cavity		院病理科
	232	Vaccine-associated rhabdomyosarcoma	Cat	台灣大學獸醫學系
	233	1. Pleura: fibrous plaque 2. Lung: adenocarcinoma 3. Brain: metastatic adenocarcinoma	Human	高雄醫學大學附設中和醫院病理科
	235	1. Neurofibromatosis, type I 2. Malignant peripheral nerve sheath tumor (MPNST)	Human	花蓮慈濟醫院病理科
	239	Glioblastoma multiforme	Human	羅東聖母醫院
	240	Pineoblastoma	Wistar rat	綠色四季
	241	Chordoid meningioma	Human	高醫病理科
	243	Infiltrating lobular carcinoma of left breast with meningeal carcinomatosis and brain metastasis	Human	花蓮慈濟醫院病理科
	245	Microcystic Meningioma.	Human	耕莘醫院病理科
	247	Well-differentiated fetal adenocarcinoma without lymph node metastasis	Human	新光吳火獅紀念醫院
	249	Adenocarcinoma of lung.	Human	羅東聖母醫院
	252	Renal cell carcinoma	Canine	國立台灣大學獸醫學系獸醫學研究所
	253	Clear cell variant of squamous cell carcinoma, lung	Human	高雄醫學大學附設中和醫院病理科
	256	Metastatic adrenal cortical carcinoma	Human	耕莘醫院病理科
	258	Hashimoto’s thyroiditis with diffuse large B cell lymphoma and papillary carcinoma	Human	高雄醫學大學附設中和醫院病理科
	262	Medullar thyroid carcinoma	Canine	臺灣大學獸醫學系
	264	Merkel cell carcinoma	Human	羅東博愛醫院
	266	Cholangiocarcinoma	Human	耕莘醫院病理科
	268	Sarcomatoid carcinoma of renal pelvis	Human	花蓮慈濟醫院病理科
	269	Mammary Carcinoma	Canine	中興大學獸醫學系
	270	Metastatic prostatic adenocarcinoma	Human	耕莘醫院病理科
	271	Malignant canine peripheral nerve sheath tumors	Canine	臺灣大學獸醫學系
	272	Sarcomatoid carcinoma, lung	Human	羅東聖母醫院
	273	Vertebra,T12,laminectomy, metastatic adenoid cystic carcinoma	Human	彰化基督教醫院

腫瘤	274	rhabdomyosarcoma	Canine	臺灣大學獸醫學系
	275	Fetal rhabdomyosarcoma	SD Rat	中興大學獸醫學系
	276	Adenocarcinoma, metastatic, iris, eye	Human	高雄醫學大學
	277	Axillary lymph node metastasis from an occult breast cancer	Human	羅東博愛醫院
	278	Hepatocellular carcinoma	Human	國軍桃園總醫院
	279	Feline diffuse iris melanoma	Faline	中興大學獸醫學系
	280	Metastatic malignant melanoma in the brain and inguinal lymph node	Human	花蓮慈濟醫院病理科
	281	Tonsil Angiosarcoma	Human	羅東博愛醫院
	282	Malignant mixed mullerian tumor	Human	耕莘醫院病理科
	283	Renal cell tumor	Rat	中興大學獸醫學系
	284	Multiple Myeloma	Human	花蓮慈濟醫院病理科
	285	Myopericytoma	Human	新光吳火獅紀念醫院
	287	Extramedullary plasmacytoma with amyloidosis	Canine	臺灣大學獸醫學系
	288	Metastatic follicular carcinoma	Human	羅東聖母醫院病理科
	289	Primitive neuroectodermal tumor (PNET), T-spine.	Human	羅東博愛醫院病理科
	292	Hemangioendothelioma of bone	Human	花蓮慈濟醫院病理科
	293	Malignant tumor with perivascular epithelioid differentiation, favored malignant PEComa	Human	彰化基督教醫院
	297	Mucin-producing cholangiocarcinoma	Human	基隆長庚醫院
	300	Cutaneous epitheliotropic lymphoma	Canine	臺灣大學獸醫專業學院
	301	Cholangiocarcinoma	Felis Lynx	臺灣大學獸醫專業學院
	302	Lymphoma	Canine	臺灣大學獸醫專業學院
	303	Solitary fibrous tumor	Human	彰化基督教醫院
	304	Multiple sarcoma	Canine	臺灣大學獸醫專業學院
	306	Malignant solitary fibrous tumor of pleura	Human	佛教慈濟綜合醫院暨慈濟大學
	307	Ectopic thymic carcinoma	Human	彰濱秀傳紀念醫院病理科
	308	Medullary carcinoma of the right lobe of thyroid	Human	彰化基督教醫院病理科
	309	Thyroid carcinosarcoma with cartilage and osteoid formation	Canine	臺灣大學獸醫專業學院
	312	Lymphocytic leukemia/lymphoma	Koala	臺灣大學獸醫專業學院
	313	Neuroendocrine carcinoma of liver	Human	佛教慈濟綜合醫院暨慈

				濟大學
腫瘤	314	Parachordoma	Human	羅東博愛醫院病理科
	315	Carcinoma expleomorphic adenoma, submandibular gland	Human	天主教耕莘醫院病理科
	316	Melanoma, tongue	Canine	國立臺灣大學獸醫專業學院
	317	Renal cell carcinoma, papillary type	Canine	國立臺灣大學獸醫專業學院
	323	Metastatic papillary serous cystadenocarcinoma, abdomen	Human	國軍桃園總醫院
	324	Malignant gastrointestinal stromal tumor	Human	天主教耕莘醫院
	329	Sclerosing stromal tumor	Human	彰化基督教醫院
	330	Pheochromocytoma	Human	天主教耕莘醫院
	334	Metastatic infiltrating ductal carcinoma, liver	Human	佛教慈濟綜合醫院
	335	Adenoid cystic carcinoma, grade II, Rt breast	Human	天主教耕莘醫院
	336	Malignant lymphoma, diffuse, large B-cell, right neck	Human	林新醫院
	337	Pulmonary carcinoma, multicentric	Dog	國立臺灣大學獸醫專業學院
	338	Malignant melanoma, multiple organs metastasis	Rabbit	國立中興大學獸醫學院
	340	Mucinous-producing urothelial-type adenocarcinoma of prostate	Human	天主教耕莘醫院
	342	Plexiform fibromyxoma	Human	彰化基督教醫院
	343	Malignant epithelioid trophoblastic tumor	Human	佛教慈濟綜合醫院
	344	Epithelioid sarcoma	Human	林新醫院
	346	Transmissible venereal tumor	Dog	國立臺灣大學獸醫專業學院
	347	Ewing's sarcoma (PNET/ES tumor)	Human	天主教耕莘醫院病理科
	348	Malignant peripheral nerve sheath tumor, epithelioid type	Human	林新醫院病理科
	349	Low grade fibromyxoid sarcoma	Human	高醫大附設中和紀念醫院病理科
	351	Orbital embryonal rhabdomyosarcoma	Dog	Gifu University, Japan (岐阜大学)
	354	Granular cell tumor	Dog	國立臺灣大學獸醫專業

				學院
腫 瘤	356	Malignant neoplasm of unknown origin, cerebrum	Dog	國立臺灣大學獸醫專業學院
	357	Small cell Carcinoma, Urinary bladder	Human	天主教耕莘醫院
	364	Perivascular epithelioid cell tumor, in favor of lymphangiomyomatosi	Human	高醫大附設中和紀念醫院病理科
	365	Angiosarcoma, skin (mastectomy)	Human	天主教耕莘醫院病理科
	366	Rhabdomyoma (Purkinjeoma), heart	Swine	屏東縣家畜疾病防治所
	368	Langerhans cell sarcoma, lung	Human	高醫大附設中和紀念醫院病理科
	369	Biliary cystadenocarcinoma, liver	Camel	國立屏東科技大學獸醫教學醫院病理科
	371	Malignant melanoma, nasal cavity	Human	羅東博愛醫院病理科
	373	Malignant giant cell tumor of tendon sheath	Human	天主教耕莘醫院病理科
	376	Malignant mesothelioma of tunica vaginalis	Golden hamster	中興大學獸醫病理生物學研究所
	377	Perivascular Epithelioid Cell Tumor (PEComa) of the uterus	Human	彰化基督教醫院病理部
	378	Medullary carcinoma	Human	高雄醫學大學病理部
	389	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	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	Squamous cell carcinoma, lymphoepithelioma-like type	Human	高醫附設醫院病理科
	393	Malignant peripheral nerve sheath tumor (MPNST), subcutis, canine.	Dog	中興大學獸醫學系
	394	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	Atypical meningioma	Human	奇美醫院病理科
細菌	6.	Tuberculosis	Monkey	臺灣大學獸醫學系
	7.	Tuberculosis	Human	省立新竹醫院
	12.	H. pylori-induced gastritis	Human	台北病理中心
	13.	Pseudomembranous colitis	Human	省立新竹醫院

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

細菌	162	Mycotic aneurysm of jejunal artery secondary to infective endocarditis	Human	慈濟醫院病理科
	170	Chronic nephritis caused by Leptospira spp	Pig	中興大學獸醫學院
	173	Ureteropyelitis and cystitis	Pig	中國化學製藥公司
	254	Pulmonary actinomycosis.	Human	耕莘醫院病理科
	259	Tuberculous peritonitis	Human	彰化基督教醫院病理科
	260	Septicemic salmonellosis	Piglet	屏東科技大學獸醫系
	261	Leptospirosis	Human	慈濟醫院病理科
	267	Mycobacteriosis	Soft turtles	屏東科技大學獸醫系
	290	*Staphylococcus* spp. infection	Formosa Macaque	中興大學獸醫病理學研究所
	291	Leptospirosis	Dog	台灣大學獸醫學系
	296	Leptospirosis	Human	花蓮慈濟醫院
	305	Cryptococcus and Tuberculosis	Human	彰濱秀傳紀念醫院
	319	Placentitis, Coxiella burnetii	Goat	台灣動物科技研究所
	321	Pneumonia, Buirkholderia pseudomallei	Goat	屏東縣家畜疾病防治所
	339	Mycoplasmosis	Rat	國家實驗動物中心
	352	Chromobacterium violaceum Septicemia	Gibbon	Bogor Agricultural University, Indonesia
	353	Salmonellosis	Pig	國立中興大學獸醫學院
	367	Melioidosis (Burkholderia pseudomallei), lung	Human	花蓮慈濟醫院
	370	Suppurative bronchopneumonia (*Bordetellae trematum)* with *Trichosomoides crassicauda* infestation	Rat	國立中興大學獸醫學院
	374	Pulmonary coccidiodomycosis	Human	彰化基督教醫院
	375	Paratuberculosis in Macaca cyclopis	Macaca cyclopis	國立屏東科技大學獸醫學院
	379	Bovine Johne’s disease (BJD) or paratuberculosis of cattle	Dairy cow	屏東縣家畜疾病防治所
	380	NTB, Mycobacterium abscessus	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	382	Leptospirosis	Pig	國立屏東科技大學獸醫學院
	384	Neisseria Infected Pneumonitis	Cat	中興大學獸醫學系
	385	Mycobacteria avian complex dacryocyctitis	Human	花蓮佛教慈濟綜合醫院

細菌	387	Swine Erysipelas	Pig	屏東縣家畜疾病防治所
	396	Suppurative meningitis caused by Streptococcus spp in pigs	Pig	國立中興大學獸醫病理生物學研究所
	399	Listeric encephalitis in dairy goats	Goat	屏東縣家畜疾病防治所
病毒	21.	Newcastle disease	Chicken	台灣大學獸醫學系
	22.	Herpesvirus infection	Goldfish	台灣大學獸醫學系
	30.	Demyelinating canine distemper encephalitis	Dog	台灣養豬科學研究所
	31.	Adenovirus infection	Malayan sun bears	台灣大學獸醫學系
	50.	Porcine cytomegalovirus infection	Piglet	台灣省家畜衛生試驗所
	55.	Infectious laryngo-tracheitis (Herpesvirus infection)	Broilers	國立屏東技術學院獸醫學系
	69.	Pseudorabies (Herpesvirus infection)	Pig	台灣養豬科學研究所
	78.	Marek’s disease in native chicken	Chicken	屏東縣家畜疾病防治所
	92.	Foot- and- mouth disease (FMD)	Pig	屏東縣家畜疾病防治所
	101.	Swine pox	Pig	屏東科技大學獸醫學系
	110.	Pseduorabies	Piglet	國立屏東科技大學
	112.	Avian encephalomyelitis	Chicken	國立中興大學
	128.	Contagious pustular dermatitis	Goat	屏東縣&台東縣家畜疾病防治所
	130.	Fowl pox and Marek’s disease	Chicken	中興大學獸醫學系
	133.	Japanese encephalitis	Human	花蓮佛教慈濟綜合醫院
	136	Viral encephalitis, polymavirus infection	Lory	美國紐約動物醫學中心
	138	1. Aspergillus spp. encephalitis and myocarditis 2. Demyelinating canine distemper encephalitis	Dog	台灣大學獸醫學系
	153	Enterovirus 71 infection	Human	彰化基督教醫院
	154	Ebola virus infection	African Gree monkey	行政院國家科學委員會實驗動物中心
	155	Rabies	Longhorn Steer	台灣大學獸醫學系
	163	Parvoviral myocarditis	Goose	屏東科技大學獸醫學系
	199	SARS	Human	台大醫院病理科
	200	TGE virus	swine	臺灣動物科技研究所
	201	Feline infectious peritonitis(FIP)	Feline	台灣大學獸醫學系
	209	Chicken Infectious Anemia (CIA)	Layer	屏東防治所

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

		(PCV II infection)		
病毒	295	Feline infectious peritonitis (FIP)	Cat	中興大學獸醫病理所
	362	Canine distemper virus infection combined pulmonary dirofilariasis	Dog	國家實驗研究院
	381	Polyomavirus infection of urinary tract	Human	羅東博愛醫院
黴菌	23.	Chromomycosis	Human	台北病理中心
	47.	Lung: metastatic carcinoma associated with cryptococcal infection. Liver: metastatic carcinoma. Adrenal gland, right: carcinoma (primary)	Human	三軍總醫院
	48.	Adiaspiromycosis	Wild rodents	台灣大學獸醫學系
	52.	Aspergillosis	Goslings	屏東縣家畜疾病防治所
	53.	Intracavitary aspergilloma and cavitary tuberculosis, lung.	Human	羅東聖母醫院
	54.	Fibrocalcified pulmonary TB, left Apex. Mixed actinomycosis and aspergillosis lung infection with abscess DM, NIDDM.	Human	林口長庚紀念醫院
	105.	Mucormycosis Diabetes mellitus	Human	花蓮佛教慈濟綜合醫院
	127.	Eumycotic mycetoma	Human	花蓮佛教慈濟綜合醫院
	138	1. Aspergillus spp. encephalitis and myocarditis 2. Demyelinating canine distemper encephalitis	Dog	台灣大學獸醫學系
	298	Systemic Candidiasis	Tortoise	中興大學獸醫學院
	318	Alfatoxicosis in dogs	Canine	國立臺灣大學獸醫專業學院
	322	Allergic fungal sinusitis	Human	羅東博愛醫院
	326	Meningoencephalitis, Aspergillus flavus	Cat	國立臺灣大學獸醫專業學院
	331	Histoplasmosis	Human	花蓮慈濟醫院病理科
	332	Pulmonary Blastomycosis	Rat	中興大學獸醫學院
	355	Encephalitozoonosis	Rabbit	國立中興大學獸醫學院
	356	Eosinophilic granuloma with fungal infection, Skin	Cat	國立臺灣大學獸醫專業學院
	386	Dermatophytic pseudomycetoma	Cat	台灣動物科技研究所

黴菌	395	Systemic Cryptococcus neoformans infection in a Golden Retriever	Dog	國立台灣大學分子暨比較病理研究所
寄生蟲	14.	Dirofilariasis	Dog	台灣省家畜衛生試驗所
	15.	Pulmonary dirofilariasis	Human	台北榮民總醫院
	20.	Sparganosis	Human	台北榮民總醫院
	46.	Feline dirofilariasis	Cat	美國紐約動物醫學中心
	49.	Echinococcosis	Human	台北榮民總醫院
	60.	Intestinal capillariasis	Human	台北馬偕醫院
	64.	1. Adenocarcinoma of sigmoid colon 2. Old schistosomiasis of rectum	Human	省立新竹醫院
	66.	Echinococcosis	Chapman's zebra	台灣大學獸醫學系
	67.	Hepatic ascariasis and cholelithiasis	Human	彰化基督教醫院
	106.	Parasitic meningoencephalitis, caused by Toxocara canis larvae migration	Dog	臺灣養豬科學研究所
	139	Disseminated strongyloidiasis	Human	花蓮佛教慈濟綜合醫院
	141	Eosinophilic meningitis caused by Angiostrongylus cantonensis	Human	台北榮民總醫院病理檢驗部
	156	Parastrongylus cantonensis infection	Formosan gem-faced civet	中興大學獸醫學院
	157	Capillaria hepatica, Angiostongylus cantonensis	Norway Rat	行政院農業委員會農業藥物毒物試驗所
	202	Colnorchiasis	Human	高雄醫學院附設醫院
	203	Trichuriasis	Human	彰化基督教醫院
	204	Psoroptes cuniculi infection (Ear mite)	Rabbit	農業藥物毒物試驗所
	205	Pulmonary dirofilariasis	Human	和信治癌中心醫院
	206	Capillaries philippinesis	Human	和信治癌中心醫院
	207	Adenocarcinoma with schistosomiasis	Human	花蓮佛教慈濟綜合醫院
	286	Etiology- consistent with *Spironucleus* (*Hexamita*) *muris*	Rat	國家實驗動物繁殖及研究中心
	327	Dermatitis, mange infestation	Serow	中興大學獸醫學院
	328	Trichosomoides crassicauda, urinary bladder	Rat	國家實驗動物中心
	362	Canine distemper virus infection combined pulmonary dirofilariasis	Dog	國家實驗研究院

寄生蟲	370	Suppurative bronchopneumonia (*Bordetellae trematum)* with *Trichosomoides crassicauda* infestation	Rat	國立中興大學獸醫學院
原蟲	4.	Cryptosporidiosis	Goat	台灣養豬科學研究所
	15.	Amoebiasis	Lemur fulvus	台灣養豬科學研究所
	16.	Toxoplasmosis	Squirrel	台灣養豬科學研究所
	17.	Toxoplasmosis	Pig	屏東技術學院獸醫學系
	51.	Pneumocystis carinii pneumonia	Human	台北病理中心
	57.	Cecal coccidiosis	Chicken	中興大學獸醫學系
	65.	Cryptosporidiosis	Carprine	台灣養豬科學研究所
	211	Avian malaria, African black-footed penguin	Avian	臺灣動物科技研究所
	242	Neosporosis	Cow	國立屏東科技大學獸醫學系
	263	Intestinal amebiasis	Human	彰化基督教醫院病理科
	320	Cutaneous leishmaniasis	Human	佛教慈濟綜合醫院
	325	Myocarditis/encephalitis, Toxoplasma gondii	Wallaby	國立臺灣大學獸醫專業學院
立克次體	229	Necrotizing inflammation due to scrub typhus	Human	佛教慈濟醫院病理科
	251	Scrub typhus with diffuse alveolar damage in bilateral lungs.	Human	佛教慈濟醫院病理科
皮膚	216	Cytophagic histiocytic panniculitis with terminal hemophagocytic syndrome	Human	佛教慈濟綜合醫院病理科
	359	Eosinophilic granuloma with fungal infection, Skin	Cat	國立臺灣大學獸醫專業學院
	360	Septa panniculitis with lymphocytic vasculitis	Human	慈濟綜合醫院暨慈濟大學
其它	9.	Perinephric pseudocyst	Cat	台灣大學獸醫學系
	10.	Choledochocyst	Human	長庚紀念醫院
	11.	Bile duct ligation	Rat	中興大學獸醫學系
	37.	Myositis ossificans	Human	台北醫學院
	75.	Acute yellow phosphorus intoxication	Rabbits	中興大學獸醫學系
	76.	Polycystic kidney bilateral and renal failure	Cat	美國紐約動物醫學中心
	80.	1.Glomerular sclerosis and hyalinosis, segmental, focal, chronic, moderate 2.Benign hypertension	SHR rat	國防醫學院 & 國家實驗動物繁殖及研究中心

	83.	Phagolysosome-overload nephropathy	SD rats	實驗動物繁殖及研究心
其它	85.	Renal amyloidosis	Dog	台灣養豬科學研究所
	89.	1.Severe visceral gout due to kidney damaged 2.Infectious serositis	Goose	中興大學獸醫學系
	91.	Hypervitaminosis D	Orange-rumped agoutis	台灣大學獸醫學系
	118.	Cystic endometrical hyperplasia	Dog	臺灣養豬科學研究所
	121.	Cystic subsurface epithelial structure (SES)	Dog	國科會實驗動物中心
	124.	Superficial necrolytic dermatitis	Dog	美國紐約動物醫學中心
	125.	Solitary congenital self-healing histiocytosis	Human	羅東博愛醫院
	126.	Alopecia areata	Mouse	實驗動物繁殖及研究中心
	142	Avian encephalomalacia (Vitamin E deficiency)	Chicken	國立屏東科技大學獸醫學系
	151	Osteodystrophia fibrosa	Goat	台灣養豬科學研究所&台東縣家畜疾病防治所
	159	Hypertrophic cardiomyopathy	Pig	台灣大學獸醫學系
	165	Chinese herb nephropathy	Human	三軍總醫院病理部及腎臟科
	167	Acute pancreatitis with rhabdomyolysis	Human	慈濟醫院病理科
	171	Malakoplakia	Human	彰化基督教醫院
	183	Darier’s disease	Human	高雄醫學大學病理科
	191	1. Polyarteritis nodosa 2. Hypertrophic Cardiomyopathy	Feline	台灣大學獸醫學系
	193	Norepinephrin cardiotoxicity	Cat	台中榮總
	196	Cardiomyopathy (Experimental)	Mice	綠色四季
	212	Kikuchi disease (histiocytic necrotizing lymphandenitis)	Lymphandenitis	耕莘醫院病理科
	225	Calcinosis circumscripta, soft tissue of the right thigh, dog	Dog	台灣大學獸醫所
	230	Hemochromatosis, liver, bird	Bird	台灣大學獸醫學系
	234	Congenital hyperplastic goiter	Holstein calves	屏東縣家畜疾病防治所
	236	Hepatic lipidosis (fatty liver)	Rats	中興大學獸醫學病理學研究所

其它	237	Arteriovenous malformation (AVM) of cerebrum	Human	耕莘醫院病理科
	244	Organophosphate induced delayed neurotoxicity in hens	Hens	中興大學獸醫學病理學研究所
	257	Severe lung fibrosis after chemotherapy in a child with Ataxia-Telangiectasia	Human	慈濟醫院病理科
	294	Arteriovenous malformation of the left hindlimb	Dog	台灣大學獸醫學系
	299	Polioencephalomalacia	Goat kid	屏東家畜疾病防治所
	310	Hyperplastic goiter	Piglet	屏東家畜疾病防治所
	311	Melamine and cyanuric acid contaminated pet food induced nephrotoxicity	Rat	中興大學獸醫學病理學研究所
	318	Alfatoxicosis	Canine	國立臺灣大學獸醫專業學院
	333	Lordosis, C6 to C11	Penguin	國立臺灣大學獸醫專業學院
	341	Pulmonary placental transmogrification	Human	羅東博愛醫院
	345	Acute carbofuran intoxication	Jacana	國立中興大學獸醫學院
	350	Malakoplakia, liver	Human	慈濟綜合醫院暨慈濟大學
	351	Eosionphilic granuloma, Right suboccipital epidural mass	Human	羅東博愛醫院病理科
	359	Eosinophilic granuloma with fungal infection, Skin	Cat	國立臺灣大學獸醫專業學院
	360	Septa panniculitis with lymphocytic vasculitis	Human	慈濟綜合醫院暨慈濟大學
	361	Hepatotoxicity of SMA-AgNPs	Mouse	國立中興大學獸醫病理生物學研究所
	363	Hypertrophy osteopathy	Cat	國立臺灣大學獸醫專業學院
	372	Snake bite suspected, skin and spleen	Monkey (red guenon)	國立臺灣大學獸醫專業學院
	383	Langerhans cell histiocytosis	Human	聖馬爾定醫院病理科
	388	Canine protothecosis	Dog	國立臺灣大學獸醫專業學院
	392	Lithium nephrotoxicity	Human	佛教慈濟綜合醫院暨慈濟大學病理科

其它	398	Gamma-knife-radiosurgery-related demyelination	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	400	Canine Disseminated form Granulomatous Meningoencephalitis (GME)	Dog	國立屏東科技大學獸醫教學醫院病理科

會 員 資 料 更 新 服 務

各位會員：

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

中華民國比較病理學會秘書處
10617 臺北市大安區羅斯福路四段 1 號
國立臺灣大學獸醫系三館 515 室 鄭謙仁秘書長 收
Tel: (02) 33663868
Fax: (02) 23621965
e-mail address: crjeng@ntu.edu.tw

----------中華民國比較病理學會----------

會員資料更改卡

姓　　名：_____　　會員類別：☐一般會員
☐學生會員
☐贊助會員

最高學歷：_____

服務單位：_____職　　稱：_____

永久地址：_____

通訊地址：_____

電　　話：_____傳　　真：_____

E-Mail Address：_____

中 華 民 國 比 較 病 理 學 會

誠摯邀請您加入

入　會　辦　法

一、 本會會員申請資格為：

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

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

（三）贊助會員：贊助本會工作之團體或個人。

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

二、 會員：

（一）入 會 費：一般會員新台幣一仟元，學生會員一佰元，贊助會員伍仟元，於入會時繳納。

（二）常年會費：一般會員新台幣一仟元，學生會員一佰元。

【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收。地址：10617 臺北市羅斯福路四段一號獸醫三館 515 室、電話：02-33663868、傳真 02-23621965。

中華民國比較病理學會入會申請及會員卡

會籍電腦編號 _____

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<tr><td rowspan="2">姓名</td><td>中文</td><td></td><td rowspan="2">性別</td><td>男 □</td><td>出生</td><td colspan="2">民國 年 月 日</td><td rowspan="2">出生地</td><td rowspan="2">省

縣/市</td></tr>
<tr><td rowspan="2">英文</td><td rowspan="2"></td><td>女 □</td><td>身分證字號</td><td colspan="2"></td></tr>
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(3)
(4)</td><td colspan="4">稱謂(請圈選) 先生 小姐 醫師 獸醫師
研究員 博士 教授 主任 其他: _____</td></tr>
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(3)</td></tr>
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永久 電話： 傳真：
電子郵遞(E-mail)地址：</td></tr>
<tr><td colspan="7">茲 贊 同
貴會宗旨擬加入爲會員嗣後並願遵守一切規章共圖發展
此 致
中華民國比較病理學會
申請人 簽章
介紹人 簽章
介紹人 簽章
中華民國 年 月 日</td><td colspan="2">審核結果</td></tr>
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