中華民國比較病理學會

Chinese Society of Comparative Pathology

第 62 次比較病理學研討會

(胸腔及胸部疾病)

主辦單位

CHINESE SOCIETY OF COMPARATIVE PATHOLOGY

中華民國比較病理學會

協辦單位

Taoyuan Armed Forces General Hospital

國軍桃園總醫院

November 09 , 2014 (中華民國 103 年 11 月 09 日)

SCHEDULE

62nd MEETING OF COMPARATIVE PATHOLOGY

中華民國比較病理學會 第 62 次比較病理學研討會

時間：103 年 11 月 9 日(星期日) 08:30~16:30　　地點：國軍桃園總醫院

地址：32551 桃園縣龍潭鄉中興路 168 號　　電話：(02) 29382300

Time(時間)	Schedule(議程)		Moderator(主持)
08:30~09:20	Registration (報到)		
09:20~09:30	Opening Ceremony (致詞) –主辦單位、理事長 (張聰洲老師簡介、頒感謝狀、追思 1 分鐘)		
09:30~10:30	專題演講	講題：Improvement of Lung Cancer Personalized Therapy by Molecular Diagnostics and Disease Animal Model. Dr. Kang-Yi Su (蘇剛毅 博士) (國立台灣大學醫學院學檢驗暨生物技術學系)	張俊梁 理事
10:30-11:00	Coffee Break (拍團體照)		
11:00~11:25	肉眼診斷	Dr. Yi-Jia Li (李伊嘉 獸醫師) Graduated Institute of Molecular and Comparative Pathology School of Veterinary Medicine, NTU (台灣大學獸醫專業學院分子暨比較病理生物學研究所)	朱旆億 秘書長
11:25~11:50	Case 428	Dr. Junn-Liang Chang (張俊梁 醫師) Department of Pathology & Laboratory Medicine , Armed Forces General Hospital (國軍桃園總醫院病理檢驗部)	
11:50~12:15	Case 429	Dr. Chiu-Hsuan Cheng (鄭秋璇醫師) 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)	
12:15~13:40	Lunch, and Board Meeting (中華民國比較病理學會理監事會議)		
13:40~14:05	Case 430	Dr. Hao-Kai Chang (張皓凱 獸醫師) Graduate Institute of Veterinary Pathology, National Chung Hsing University (中興大學獸醫病理生物學研究所)	梁鍾鼎 理事
14:05~14:30	Case 431	Dr. Chia-Wen Shih (施洽雯 醫師) Department of Pathology, Lotung Poh-Ai Hospital (羅東博愛醫院)	
14:30~15:00	Coffee Break		
15:00~15:25	Case 432	Dr. Li Hung-Ru (李鴻儒 醫師) Department of pathology, Kaohsiung medical school Chung-Ho memorial hospital (高雄醫學大學附設醫院)	鄭謙仁 監事
15:25~16:50	Case 433	Dr. Chung-Tiang Liang (梁鐘鼎 獸醫師) National Applied Research Laboratories (國家實驗動物中心)	
14:50~16:15	Case 434	Dr. Pei-Yi Chu (朱旆億 醫師) Department of Pathology, St. Martin De Porres Hospital (天主教聖馬爾定醫院病理科)	
16:15~16:30	General Discussion (綜合討論)		

目　　錄

專題演講

Improvement of Lung Cancer Personalized Therapy by Molecular Diagnostics and Disease Animal Model

Su Kang-Yi Ph. D

Department of Clinical Laboratory Sciences and Medical Biotechnology, College of Medicine, National Taiwan University
Pharmacogenomics Laboratory, National Research Program for Biopharmaceuticals

Lung cancer is the leading cause of cancer-related death worldwide. Although platinum-based chemotherapy is the standard treatment for patients with advanced-stage non-small-call lung cancer (NSCLC), the improvements in patients' survival and quality of life during therapy is still a large problem. A major advance in NSCLC management is the understanding of molecular biology, development of molecule-targeting agents, and identification of novel targets for patient selection for specific treatment. The achievement of therapy improvement needs at least three issues to cooperate each other including the development of genomic research to identified novel "driver gene mutations" for targeting, the sensitive molecular diagnostic platform for selecting patients benefit to therapy, and the ideal disease animal model for preclinical validation of potential drugs. In the past five years, we have established a MALDI-TOF mass spectrometry based platform with high sensitivity and specificity to providing multiplex gene testing including EGFR, KRAS, BRAF, HER2 genes in NSCLC patients. This progress precisely guides over 5000 patients to receive proper target therapy or selects patients to participate clinical trials.

Unfortunately, the drug resistance is often occurred 10 to 12 months after EGFR tyrosine kinase inhibitor (EGFR-TKI) target therapy and the issue of solutions to overcome treatment fail is raised. In addition to detect resistant mutations, novel drug development is another hot topic. Therefore, we have also established inducible mutant EGFR transgenic lung cancer mouse model for drug preclinical trials. In conclusion, with our translational research, patients with NSCLC can be identified for receiving specific target therapy to prolong survival and improve life quality.

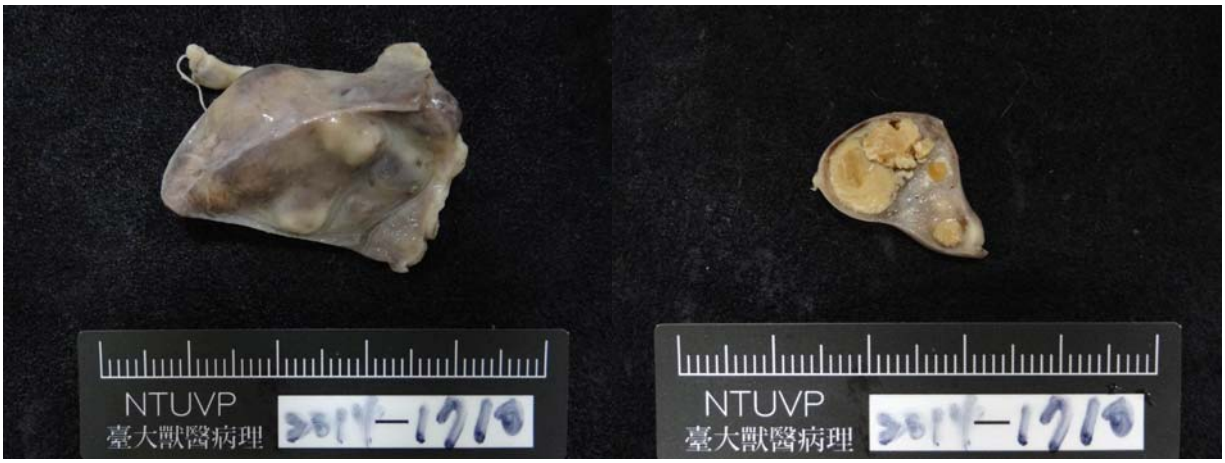
Gross show

Dr. Yi-Jia Li (李伊嘉), DVM, MS; Chen-Hsuan Liu (劉振軒) DVM, PhD,
School of Veterinary Medicine, National Taiwan University, Taiwan. R.O.C.

CASE HISTORY：

Signalment: Feline, Persian, 11 year-old, spayed female. Multiple nodules and masses were noted in the whole lung.

Picture:



Contributor diagnosis: Broncholithiasis, lung.

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CASE DIAGNOSIS

Case No.	Presenter	Slide No.	Diagnosis
Case 428	張俊梁		Maligant lymphoma, diffuse large B-cell (DLBCL) in a women
Case 429	鄭秋璇		Immune reconstitution inflammatory syndrome (IRIS)-associated Kaposi's sarcoma in a man
Case 430	張皓凱		Mammary adenocarcinoma, tubular form in a female feline
Case 431	施洽雯	LP-11976	pulmonary alveolar proteinosis in a man
Case 432	李鴻儒	KMU-12-20210	Congenital pulmonary airways malformation, type 2 in a women
Case 433	梁鐘鼎	S140598-3	Rhabdomyosarcoma, retroperitoneal cavity in a female mouse
Case 434	朱旆億	CSCP-1	Malignant pheochromocytoma with pleural metastasis in a man

Case Number: 428
Slide No.:
Slide view: http://140.112.96.83:82/CSCP/62CSCP/Case%20428/7045.svs/view.apml

*Chang, J.L. (張俊梁), MD, PhD.
*Department of Pathology & Laboratory Medicine, Taoyuan Armed Forces General Hospital（國軍桃園總醫院 病理檢驗部）.

CASE HISTORY：
Signalment: A 60-year-old female

Clinical History:

A 60-year-old female presented with a palpable painless mass on the right side of the breast for one week since February 2, 2012. He had history of type II DM, hyperlipidemia, and essential hypertension visited at our OPD with regular medical treatment for four years. So, she was referred to the surgical department for further evaluation and management. She had no familial history of malignancy. No history of surgery, drug allergy, alcoholic and smoke habit.

In surgical OPD, physical examination showed a palpable fixed painless well-circumscribed mass, non-tender, elastic, oval tumor measured about 2 to 3 cm in dimension over the right lower outer quadrant of the breast. The ultrasounography showed a tumor mass with regular margin, hypoechonic, complex enhanced posterior shadowing in appearance. No axillary lymphadenopathy or pathological neurological defect was found. The palpable tumor mass measured about 2.3 cm in the largest dimension, and estimated as assessment category BIRADS III (Breast Imaging-Reporting and Data System, Probably benign finding-short interval follow-up suggested) and the fibroadenoma of the breast was highly suspected. Then, she received the followed completely excision procedure was performed after two days later. HENNT and lung conditions showed non-remarkable. Others were non-contributions.

Laboratory results (Clinical Pathology)：
The laboratory examinations: TC: 157 mg/dl (110-200), TG: 122 mg/dl (21-175), LDL: 98 mg/dl (<100), Glu: 128 mg/dl (70-110), urine protein: trace.

Gross Findings：
The mass lesion submitted consisted of a small piece of breast tissue fragment with brown tom purple in color on sections, measured 3 x 3 x 1.5 cm totally, and exhibited well-circumscribed, rubbery, and gray-whitish in appearance. On sections, a small well-pseudocapsulated tumor measured 2 x 2 x 1.5 cm, respectively.

Case Number: 428

CASE RESULT：

Histopathologic Findings：

Microscopically, the tumor demonstrated pictures of a well-defined pseudocapular obvious lymphoid tissue with marked reactive hyperplasia, which was a severe diffuse infiltration of dark cells mild polymorphism, variety of medium and large cell types, obscure vascular proliferation, lymphoepithelial lesion and no prominent lymphoid follicle. The infiltrate varied in its density; around the ducts it was more dense and in between these areas less so. There also presented focal intersperse mammary glandular components which was surrounded by peripheral fibroadipose tissue. These tumor cells demonstrated that characterized a rather uniform and monotonous moderate to large lymphocytic proliferation, mild nuclear polymorphism, hyperchromatism with nucleolus, and occasional mitoses. Some of the cells were larger and had a clearer, more oval nucleus. There was no evidence of extensive hemorrhage and necrosis.

Immunohistochemistry：

Immunohistochemical study, these tumor cells displayed diffusely strongly immunoreactivity for CD45, CD20, Bcl-2. In addition, there focally scattered reactive mature T-cells for CD3 stain, negative stains for CD10, CD30, Bcl-6, EMA and pan-CK. There also revealed increased proliferative index K-67 with 85% of involved lymphoma cells. A majority of DLBCLs show expression of the bcl-6 protein, with some cases demonstrating a rearrangment of the BCL6 gene. About 20% of the cases have good evidence for a follicular center cell origin in the form of a t(14;18), BCL-2 rearrangement. Another soft indication of a follicular center cell origin (and perhaps transformation from a folliclar lymphoma) is the presence of small-cleaved cells interspersed among the large cells. The WHO classification of DLBCLs takes note of several morphological variants: Centroblastic, Immunoblastic, T-cell/histiocyte-rich, Lymphomatoid granulomatosis type, Anaplastic B-cell, Plasmablastic. According to the light microscopic pictures and by immunohistochemical findings, the diagnosis of malignant lymphoma, diffuse large cell type, was made (using 'The Working Formulation for Clinical Usage' of the Non-Hodgkin's Lymphoma Pathologic Classification Project). She was transferred to medical center for further management. The post-operative work-up, including bone marrow biopsy and computed tomographic (CT) scan, did not reveal any residual malignant process. Post-operatively, the patient received adjuvant chemotherapy (by CHOP (cyclophosphamide, Adriamycin, vincristine, prednisone) in completely courses. Two years after surgery the patient underwent reevaluation, including CT scan, in which revealed no pathological findings. After a total of six cycles of chemotherapy the physical examination did not reveal any abnormalities. The CT of the thorax and abdomen was normal. There were no signs in the bone marrow smear and trephine biopsy of infiltration by lymphoma.

She was free of disease without signs of recurrence after 2-years of follow-up. She is continued received the treatment for her HCVD, DM, and hyperlipemia at our hospital.

Differential Diagnosis：

1. Pseudolymphoma (MALT-type lymphoma) or lymphoid hyperplasia.
2. Malignant lymphoid tumors: Burkitt lymphoma, Hodgkin lymphoma, Plasmacytoma, Intravascular lymphoma, Anaplastic large cell lymphoma, Myelocytic leukemia.
3. Poorly differentiated carcinoma.

Diagnosis：Maligant lymphoma, diffuse large B-cell (DLBCL). (Primary breast lymphoma-PBL).

Discussion：

The term “primary breast lymphoma” (PBL) is used to define a malignant lymphoma primarily occurring in the breast in the absence of previously detected lymphoma localizations. PBL is a rare disease, accounting for only 0.4-0.5% of all breast malignancies, 0.38-0.7% of all non-Hodgkin lymphomas (NHL), and 1.7-2.2% of extranodal NHL. The breast is rarely a primary site for extranodal lymphoma. Majority of primary Non-Hodgkin’s lymphoma of breast occurring in younger age group are bilateral and those in older age group are unilateral. The median age of patients with diagnosed PBL ranges from 60 to 65 years. Bilateral breast involvement accounts for 11% of all breast lymphomas or 5% according to Ryan et al. in 2006. This rare situation is especially observed during pregnancy or postpartum, suggesting that tumour growth is influenced by hormonal stimulation. Breast lymphoid cells probably originate in mucosa-associated lymphoid tissue (MALT). Diffuse large B-cell lymphoma (DLBCL) is the most common histological diagnosis. PBL may also originate from lymphatic tissue present within the breast adjacent to ducts and lobules, or from intramammary lymph nodes. More than 80% of PBL are B-cell lymphomas, mostly CD20+. The most frequent histopathologic types are: diffuse large B-cell lymphoma (DLBCL). These lymphomas have been shown to be of a non-germinal centre B-cell phenotype with a high proliferation index and are thought to be associated with a poor outcome. The clinical presentation of PBLs is usually no different from that of carcinoma. On the other hand, secondary involvement of the breast with lymphomas is not uncommon.

In clinical presentations, the majority of breast lymphoma presents as a unilateral painless breast mass in an older woman (average age at diagnosis 55 to 60). For unknown reasons, the right breast is involved more often than the left. Ipsilateral axillary lymphadenopathy is present in 30 to 40 percent of cases. There is some evidence that widespread mammographic screening for breast carcinoma is leading to increased incidental detection of lymphoma of the breast. Disease is often bilateral and may clinically mimic inflammatory breast cancer. Most of these women have highly aggressive, Burkitt lymphoma. If any doubt exists on morphological grounds as to the nature of malignant tumour of the breast, the possibility of PBL should always be considered and immunohistochemical studies using panel of antibodies that includes minimum markers of CD45,

CD45RO, CD3, CD20, Bcl-2, Bcl-6 and epithelial markers should be mandatory. The clinical presentation and radiology of breast lymphoma and carcinoma are similar. Both present as painless enlarging breast lump. The criteria for defining and documentation of Primary Breast Lymphoma first proposed by Wiseman and Liao with minor modification accepted by others are i) Availability of adequate histological material ii) Presence of breast tissue in or adjacent to the lymphoma infiltrate iii) No concurrent nodal disease except for the involvement of axillary lymph node. iv) No previous lymphoma in other organ or tissue. On mammogram lymphoma may lack the irregular border of infiltrating carcinoma and more than half exhibit no calcification. Pathology remains the gold standard to differentiate these two malignancies. Histopathology, IHC and / or flowcytometry are helpful in differentiating primary breast lymphoma from other tumours. Breast lymphomas have been reported in men although they are rare. Systemic "B" symptoms (i.e, fever, weight loss, night sweats) are uncommon.

In previous study suggest that a pathologic specimen with close association between the lymphomatous infiltrate and the breast tissue. No evidence of widespread disease or prior extramammary lymphoma. The breast is the principal site of involvement, but ipsilateral axillary lymph node involvement is acceptable if both lesions develop simultaneously. The diagnosis of primary breast lymphoma must always be confirmed by histopathology and immunohistochemistry. Tumors are presumed to arise from lymphocytes residing in intramammary lymph nodes or the breast lymphatic system [12]. Lymphocytes within the breast are thought to be a part of the mucosa-associated lymphoid tissue (MALT). Burkitt lymphomas of the breast are less common and, as noted above, are associated with a distinct clinical picture.T cell lymphomas rarely arise in the breast, and they are associated with an aggressive clinical course. Uncontrolled studies suggest that women who have had silicone breast implants may have an increased relative risk, but extremely low absolute risk, of developing anaplastic large cell lymphoma (ALCL). To evaluate and staging, although a core biopsy is adequate to make a diagnosis of a breast lymphoma, an excisional biopsy is preferable.

Radiographically, breast lymphomas appear as nonspecific circumscribed masses that lack calcification or evidence of a desmoplastic reaction (ie, retraction), but these features are nonspecific. Staging should be based upon a careful history and physical examination, appropriate imaging (computed tomography of the chest, abdomen and pelvis, or integrated PET-CT), bone marrow aspiration and biopsy, and laboratory studies (including a serum lactate dehydrogenase level). Assessment of the contralateral breast is essential since approximately 10 percent of cases are bilateral.

In general, treatment of primary breast lymphomas follows treatment recommendations for lymphomas of the same stage and histology in other locations. The choice of chemotherapy regimen should be based upon histologic subtype, disease extent, and the individual patient.Mastectomy, whether simple, modified radical, or radical, does not appear to improve survival or risk of recurrence in the treatment of most subtypes of primary breast lymphoma. A potential exception is

breast implant-associated ALCL confined to the fluid within the capsule surrounding the implant for which capsulectomy is appropriate. Treatment with mastectomy also failed to reduce recurrence risk and was associated with both higher all-cause and disease-specific mortality and a decreased use of radiation and/or chemotherapy, treatment modalities that did improve outcomes. Therapeutic options and clinical outcome, the behaviour of PBL is thought to be similar to that of lymphomas of the same histological types and stages arising at other sites. The patients with PBL probably also have a stage-for-stage clinical outcome. The method chosen for treating PBL using radiation therapy and/or chemotherapy also varies in the literature. Currently, the use of combined therapy is considered to be more useful treatment of patients with PBL even in the early stages of their illness. Mastectomy is not recommended because it offers no benefit as regards survival or recurrence risk. The most common chemotherapy agents used in PBL have been those in the CHOP regimen. Strategies to minimize the cardiac toxicity risks associated with doxorubicin-containing combination regimens, by using adjuvant radiation therapy, have been reported for non-Hodgkin's lymphoma of sites other than breast and may be important. Diffuse large B cell lymphoma (DLBCL) plays a role of central nervous system (CNS) prophylaxis in breast lymphoma is controversial.

Prognosis is dependent upon clinical stage and histologic type. As with localized non-Hodgkin lymphoma (NHL) at other sites, poor prognostic indicators include age greater than 60, elevated serum lactate dehydrogenase (LDH), stage II rather than stage I disease, and Eastern Cooperative Oncology Group (ECOG) performance status ≥2. There are many controversies about prognostic factors for patients with PBL. One of these is the histological subtype of PBL. According to Ryan et al., a favourable International Prognostic Index (IPI) score, the use of anthracycline-containing chemotherapy, and radiotherapy (RT) are signi - ficantly associated with longer overall survival (OS). Similarly, Jeanneret-Sozzi confirmed, by means of univariate analysis. These favourable prognostic factors are: early stage (IE), conservative surgery, RT administration and combined modality treatment. Multivariate analyses also confirm that the early stage and use of RT are favourable prognostic factors. Patients with intermediate or high grade disease have better out come if chemotherapy is included. Overall 5 year survival rate is 43%.

Summary & recommendations:

The breast is rarely a primary site for extranodal lymphoma. Majority of primary Non-Hodgkin's lymphoma of breast occurring in younger age group are bilateral and those in older age group are unilateral. They are of B cell phenotype. Diagnostic criteria include the following: A pathologic specimen with close association between the lymphomatous infiltrate and the breast tissue. No evidence of widespread disease or prior extramammary lymphoma. The breast is the principal site of involvement, but ipsilateral lymph node involvement is acceptable if both lesions develop simultaneously.

The treatment of primary lymphoma of the breast is similar to lymphoma of the same stage and histology in other locations. Mastectomy offers no benefit in the treatment of PBL. Nodal status

predicts outcome and guides optimal use of radiation and chemotherapy. The choice of chemotherapy (C/T) regimen and/or use of radiation therapy (RT) is based upon histological subtype, disease extent, and the individual patient. Given the high incidence of central nervous system (CNS) recurrence in patients with DLBCL of the breast, CNS prophylaxis should be considered.

References：

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Case Number: 429
Slide no.:
Slide view:

Chiu-Hsuan Cheng(鄭秋璇), Yung-Hsiang Hsu(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)

CASE HISTORY

Signalment: a 40-year-old man

Clinical History:

A 40-year-old man, who was generally healthy before, was transferred from New Taipei City Hospital, Banqiao Branch to National Taiwan University Hospital on June 5, 1996 for fever, chillness, and malaise for two months and body weight loss (8 kg within one month). Posterior pharyngeal tumor, herpes simplex and oral candidiasis were found at NTUH. Chest X-ray showed miliary tuberculosis. HIV ELISA test was positive. Biopsy of right neck lymph node and acid-fast stain of sputum confirmed to be tuberculosis. The serologic test for syphilis was positive. Biopsy of posterior pharyngeal tumor proved to be Kaposi's sarcoma. Bone marrow biopsy was performed due to leucopenia and showed hypocellular marrow. Combination regimen of anti-tuberculosis drugs was prescribed. Then he was transferred to Buddhist Tzu-Chi General Hospital.

At first admission to Tzu-Chi Hospital on October 8, 1996, his chief complaints were poor intake, dizziness and malaise. Both HIV ELISA test and western blot confirmed positive. He was treated with three combination anti-TB drugs (EMB+PZA+INH), Acyclovir for HSV infection, Ceftriaxone, Amikacin and Trimethoprim-Sulfamethoxazole. He received antiviral treatment, Zidovudine (AZT) since October 8, 1996, but the drug was changed to ddI (Didanosine) on November 11, 1996 due to refractory bone marrow suppression. Bilateral blurred vision developed later and CMV retinitis was diagnosed, so intravitreous Gancyclovior injection was done.

At second admission to our hospital on December 5, 1996, skin lesions were found. Skin biopsy of chin and neck revealed Kaposi's sarcoma. CD4 absolute count was 18/ul only. Drugs for tuberculosis, syphilis, candidiasis and CMV retinitis were continuously given but the ddI was discontinued since January 15, 1997. Bilateral pulmonary infiltration was found and Pneumocystis jiroveci infection was suspected. The dose of Trimethoprim-Sulfamethoxazole was increased to the level to treat Pneumocystic pneumonia. The symptoms had been improved at the time of discharge.

The patient was admitted to our hospital again on Feb.22, 1997 due to dyspnea and cough with sputum for 2 weeks. Kaposi's sarcoma was found in both lower legs. More immunosuppression was noted with CD4 absolute count of 10/ul. Antiretroviral therapy was reintroduced on April 28, 1997 with Zalcitabine (ddc), Lamivudine (3TC) and Saquinavir. Pre-HAART HIV viral load was

313.1x10^3 copies/ml.

The patient was readmitted on May 20, 1997 because many skin lesions developed including the trunk, all extremities, perianal and foreskin of penis. The patient received right big toe amputation on June 17, 1997 for Kaposi's sarcoma. The virus load had been decreased to 20.93copies/ml within 32 days starting combination ART. CD4 count increased to 41/ul.

On August 22, 1997, the patient was admitted again with chief complaint of fever with dyspnea. Abdominal fullness and bilateral lower legs edema superimposed on. After admission, anti-tuberculous drugs, antiretroviral drugs and Trimethoprim -Sulfamethoxazole were continued. Antibiotics (Cephapirin and Gentamycin) were administered. Diuretics (Furosemide and Aldosterone) were started for ascites. Fever and dyspnea persisted in spite of the above treatments. His condition gradually down hilled and he expired on October 7, 1997.

Case Number: 429

CASE RESULT

At autopsy, the body measures 165cm in length and 56kg in weight. Multiple Kaposi's sarcoma lesions were seen over chin, neck, left flank, four extremities, perianal and prepuce of penis, mostly presenting as nodular to ulcerative lesions. The lower limbs are edematous. The right big toe, being amputated before, showed no local recurrence. Two tumor masses were seen in between the tonsils, tongue base and oropharynx. After opening the thoraco-abdominal cavity, there was 300c.c of serous ascites. Foci of Kaposi's sarcoma were seen on the serosa of stomach and diaphragm, some disseminated in the liver. The kidneys, 120gm each, were also involved by Kaposi's sarcoma, especially numerous in the cortical area. The urinary bladder was scattered with focal hemorrhagic spots. Some enlarged lymph nodes with tumors were found in the peripancreatic and retroperitoneal regions.

After opening gastrointestinal tract, many Kaposi's sarcoma nodules were found in the mucosa of the stomach (especially at the lesser curvature), duodenum, jejunum, ileum, colon and anal canal. Those tumors presented as polypoid, nodular and/or ulcerative pattern. The right and left lungs, weighting 750 and 780gm respectively, revealed thickened pleurae and foci of adhesion. Some hemorrhagic nodules were seen on the pleural surfaces. On cut, disseminated Kaposi's sarcomas were seen in both lungs. They were hemorrhagic, yellowish nodules involving all segments of all lobes. The hilar and paratracheal nodes were also involved by tumor.

Histopathologic Findings:

Under low power magnification, some of the lung parenchymal tissues are replaced by cellular nodules surrounding the bronchioles and vessels (bronchocentric and angiocentric patterns) with rather normal lung tissues in between. At higher power magnification, those nodules consist of spindle cells in fascicles, vascular channels filled with erythrocytes lined by flat endothelial cells and extravasated erythrocytes. Spindle cells show positivity for CD34 indicating its endothelial origin. Nuclei of some of those cells stain for HHV-8 (KSHV) antigen.

Diagnosis: Immune reconstitution inflammatory syndrome (IRIS)-associated Kaposi's sarcoma

Discussion:

Kaposi's sarcoma (KS) is the most common neoplasm occurring in patients with AIDS. The percentage of people who had KS decreased in the HAART era. Typically KS involves skin of trunk, penis, legs and feet and mucosa of the mouth and nose while it less frequently affects visceral organs. Common extra-cutaneous sites of involvement are GI tract, lung, liver and lymph node.

The incidence of pulmonary KS was found to be approximately 10% in patients with AIDS, and 6 to 32% of patients with cutaneous KS. Seldom was pulmonary disease found without concomitant extrapulmonary presentation. The clinical presentation of pulmonary KS is nonspecific, and may be difficult to distinguish from infectious diseases. Most common symptoms involve cough, shortness of breath and fever. Other symptoms such as hemoptysis, wheezing, and chest pain are more likely to be of infectious etiology. The radiographic findings in pulmonary KS patients usually show reticulonodular infiltration or diffuse interstitial infiltration. Bronchoscopic appearance of KS is quite characteristic, showing bright to dark red to purple lesions in the mucus membranes of the transbronchial trees. Unfortunately, bronchoscopic biopsy had low diagnostic yield because lesions are focal and more scattered throughout the pulmonary interstitium. Pathologic findings consist of loosely aggregated spindle cells with atypical nuclei and occasional mitotic figures, often displaying angiocentric and lymphangitic distribution. Pulmonary lesions are typically less cellular than cutaneous lesions. Split-like spaces filled with erythrocytes are lined by flat endothelial cells. Extravasated erythrocytes and hemosiderin between the spindle cells are present.

Widespread use of combined antiretroviral therapy (cART) dramatically reduced the incidence and improved the prognosis of AIDS-associated KS. However, a proportion of patients with HIV infection who subsequently receive highly active antiretroviral therapy (HAART) experiences deterioration in their clinical status, despite control of virologic and immunologic parameters. This clinical response, known as the immune reconstitution inflammatory syndrome (IRIS), has been related to a growing number of infectious, autoimmune, and neoplastic manifestations, including tuberculosis, nontuberculous mycobacteria, cryptococcus, herpesviruses and KS.

The criteria proposed by French defined IRIS-associated KS as an abrupt clinical worsening of a previously existing KS (paradoxical IRIS-KS) or new presentation of a previously unknown KS (unmasking IRIS-KS) in temporal association with initiation of HAART, and either with a concomitant reduction of at least 1 log10 of HIV-1 RNA levels at the time of the IRIS event or with 2 of the 3 minor criterias (1) increased CD4+ T-cell count after HAART; (2) increase in an immune response specific to the relevant pathogen; (3) spontaneous resolution of disease without specific chemotherapy with continuation of HAART.

There is a general consensus that IRIS results from the rapid expansion of antigen-specific CD4+ and CD8+ lymphocytes following initiation of HAART. Recovery of CD4 T lymphocyte count following HAART is normally biphasic. The first phase (redistribution) is associated with an increase in the numbers of CD45RO+ memory T cells redistributed from lymphoid tissue to peripheral circulation. Thereafter, a slower secondary increase of predominately naive CD4+ T cells

(CD45RA+, CD62L+) occurs. Interferon gamma (IFN-γ)-secreting CD4+ cells and T-helper 1 (Thl) cytokines excess with a concomitant suppression of interleukin-10 (IL-10), a physiological suppressor of IFN-γ production, lead to an imbalance between pro-inflammatory and anti-inflammatory immune responses during the immune reconstitution phase characterized by IRIS. HAART can increase the absolute number of lymphocytes secreting tumor necrosis factor alpha, IFN-γ and interleukin-1-beta (IL-1β), which have been linked to the tumorogenesis of KS. These inflammatory cytokines both reactivate latent HHV-8 and up-regulate the expression of integrins, matrix metalloproteases and vascular endothelial growth factor (VEGF) by endothelial cells.

A prospective study in Mozambique identified 4 independent predictors of IRIS-KS , including clinical pretreatment of KS, detectable plasma HHV-8 DNA, hematocrit < 30% and a high plasma HIV viral load (> or = 50copies/mL). Another study performed on the Chelsea and Westminster HIV cohort showed that IRIS-KS occurred in patients with higher CD4 counts at KS diagnosis, KS-associated edema, and therapy with both protease inhibitors and nonnucleosides together.

Although patients with Kaposi's sarcoma have been reported to have an overall five-year relative survival rate of 90%, the prognosis gets worse once disseminated disease occurs. Furthermore, IRIS-associated KS can be a life-threatening situation. However, IRIS does not indicate failure of HAART or a need for changes in anti-retroviral regimen. Instead, chemotherapy in conjunction with HAART can effectively control the symptoms of IRIS and resolve KS.

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Case Number: 430
Slide No.:
Slide view:

Hao-Kai Chang(張皓凱)DVM[1], Ming-Pao Cheng (鄭明寶)[2]DVM, Wen-Fa Chang(張文發)[2]DVM, MS, Cheng-Chung Lin(林正忠)DVM, PhD[1].

[1] Graduate Institute of Veterinary Pathobiology, National Chung Hsing University (國立中興大學獸醫病理生物學研究所)

[2] Animal Disease Diagnostic Center, National Chung Hsing University (國立中興大學獸醫疾病診斷中心)

CASE HISTORY:

Signalment: 13 year-old female feline. The body weight was 1.83 kg.

Clinical History:

A small and firm mass was palpated in the left third mammary gland on September, 2013 without active therapy. The mass was enlarged and considered mammary gland tumor as the tentative diagnosis due to results of palpation and inspections on May, 2014. The cat was dead on 6th, September, 2014.

Gross Findings:

A large mass measuring 4*2.5 cm in size was nearby the third mammary gland on the left with abundant yellow-green secreta accumulated on the surface. The hard tactility extended from epidermis to subcutaneous. Multiple white to yellowish nodules in variant sizes(0.3-1.5cm) and irregular appearance scattered in the subcutaneous of right abdomen. Same masses could also be found in the subcutaneous between 3rd to 4th ribs. Left inguinal, right axillary, left submandibular and bilateral internal iliac lymph nodes were enlarged with yellowish miliary like nodules on the surface. The left kidney severely atrophy with uneven surface. Abundant bloody discharge accumulated in the pleural cavity. White, variant sizes of nodules distributed in the parietal pleura diffusely. Nodules also could be observed diffusely in the lung, diaphragm, pericardium and heart.

Case Number: 430

CASE RESULT:

Histopathological Findings:

Epithelial cells in the mass of mammary gland were arranged in tubular like structure, and were surrounded by abundant stroma. This cribriform arrangement of the tumor cells was the predominant feature in the mammary gland, kidney, bilateral adrenal gland, spleen, lung and multiple lymph nodes, including left inguinal, right axillary, left submandibular and bilateral internal iliac lymph nodes. The tumor cells were pleomorphic with prominent nucleoli. Mitotic features of the tumor cells were inconspicuous. Parenchyma of the cerebrum and cerebellum could found tubular-form structure of the tumor cells focally, too. Hyaline, eosinophilic fluid was accumulated in the tubular lumen of tumor cell in the ileum. Massive necrosis in zone III of the liver could be observed without tumor cells infiltration. Thyroid showed moderately atrophy without tumor cells infiltration.

Immunohistochemistry stain

Cytokeratin AE1/AE3：positive
Vimentin：positive
Human estrogen receptor-2：negative

Differential Diagnosis

1. Mammary adenocarcinoma, tubular form
2. Renal adenocarcinoma
3. Thyroid adenocarcinoma
4. Feline infections peritonitis

Diagnosis: Mammary adenocarcinoma, tubular form

Discussion:

Mammary gland tumors (MGT) are very common in many animals, especially in dogs and cats. A wide variety of histological types occur in dogs, although at least half of them are benign. In cats, most tumors are malignant and very aggressive. MGT is the most common tumor in dogs, while the frequency in cats is relatively low. MGT occur in older dogs, usually those that are entire or have been spayed after numerous seasons. There is no distinct breeding propensity of the MGT in dogs. MGT is the third most common form of neoplasm in feline besides skin tumors and lymphoma. Approximately 90% of feline mammary tumor is histologically malignant. Siamese cats may be more at risk than other breeds.

The relative risk of developing to a mammary tumor is related to the number of oestrus cycles a

dog has experienced. In entire cats, there is a seven-fold increased risk of mammary tumors compared to those spayed at puberty. Both oestrogen or progesterone receptors are present in 40% to 70% of canine mammary tumor; although at lower concentrations than in human breast tumors. More malignant, undifferentiated tumors tend to be receptor negative. Low concentrations of progesterone receptors are reported in feline mammary tumors and approximately 10% of tumors contain oestrogen receptors.

Two caudal pairs of mammary glands are most often affected in dogs, while the anterior glands are most affected in cats. In this case, the anterior glands were no obviously abnormality. MGT may be single or multiple and are usually easily palpable as there were discrete nodules or masses presented in the mammary glands.

Histologic patterns were classified into four groups according to the World Health Organization (WHO) criteria for mammary tumors in dogs and cats. Carcinomas were classified as tubular, papillary, solid, cribriform, or mucinous. Tubular carcinomas were characterized by the formation of varying sizes of tubules with or without papillary projections into the lumen. Tubular form was the characteristic structure of the mass in this case while some papillary architecture could be observed in the lumen. According to the features of the mass, morphology diagnosis of the case was MGT, tubular form. Bizarre nuclei and polymorphism of the tumor cells distinguish the poor prognosis.

A number of studies have shown that the size of the primary at initial presentation is a good prognostic indicator and the staging system is based on tumor size, which is the most significant factor affecting long-term survival in cats.

Immunohistochemistry (IHC) stain of human breast lesions have been extensively studied, in particular for the distribution of cytoskeletal proteins such as keratins, vimentin, desmin, and actin. The human epidermal receptor protein-2 (c-erbB-2; HER2) oncogene protein is a transmembrane glycoprotein in the epidermal growth factor receptor family. It is expressed at low levels in a variety of normal epithelia, but amplification of the HER2 gene and concomitant protein overexpression are present in 10–20% of primary breast cancers. The strong positive signal distributed in the mass diffusely distinguished the tumor cells as the epithelia. Positive signal of the vimentin which surrounded the tubular structure of the tumor mass indicated the myoepithelial cells. Though the HER-2 is the important diagnosis factor in the human, the value is comparatively low in the domestic animal, especially in the feline. The sensitivity of the HER-2 is lower than 60% in the well differentiate mammary gland tumor, while the sensitivity is much lower in malignant tumor. Expression of estrogen receptors (ER) is a clinically important parameter in the management of women suffering from breast cancer and provides prognostic information on patient outcome. In bitches, ER determination in mammary gland tumors has prognostic value. In queens, a similar percentage of malignant tumors expression ER, but the relationship with prognosis is not known. Because of the unknown value of ER marker in the feline, we didn’t choose the ER marker as the reference.

Mastectomy of the affected side is superior to regional resection. Recurrence is unlikely to be

reduced by ovariohysterectomy. Recurrence of tumor should be treated with surgery whenever possible. Radiotherapy has not been shown to be effective in the treatment of canine or feline mammary tumors.

According to the diffusely, severe adhesive pleuritis, feline infectious peritonitis(FIP) should be considered as a differential diagnosis. Because of the diagnosis criteria of FIP, pyogranuloma, which could not be found in the pleural cavity, FIP should be zoomed out from the diagnosis.

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Case Number: 431

Slide No.: LP-11976

Slide view: http://140.112.96.83:82/CSCP/62CSCP/Case%20431/7054.svs/view.apml

Shih, C.W. (施洽雯), M.D., M.S[1], Chen, C.T. (陳朱德), M.D.[1], Lin, C. M. (林志明), M.D.[2]
Yu, S. L (游勝嵐), M.D.[3]
1. Department of Pathology, Lotung Poh-Ai Hospital (羅東博愛醫院病理科)
2. Department of Chest surgery, Lotung Poh-Ai Hospital (羅東博愛醫院胸腔外科)
3. Department of Radiology, Lotung Poh-Ai Hospital (羅東博愛醫院放射診斷科)

CASE HISTORY:

Signalment: 37-year-old man.

Clinical History:

A 37-year-old man who was sent to our ER (emergency room) with the chief complaint of dyspnea and chest pain after falling into gutter last night. The patient was a chronic smoker and had smoked 1 pack of cigarettes daily for more than 25 years. There was no past history of hypertension, diabetic, and CVD (cardiovascular disease). Physical examination showed T: 36.7℃, PR:74 /min, PR:20 /min, BP: 114/67 mmHg. At ER, the CXR (chest x-ray) showed bilateral diffuse ground-glass opacities associated with reticulations in both lungs. Under the diagnosis of R/O ARDS, he was then admitted to ward for further evaluation and management. Follow up CXR still showed poor condition. VATS (Video Assisted Thoracoscopic Surgery) with wedge resection of lung was performed. The lung tissue was sent for pathologic diagnosis. Grossly, the specimen submitted consisted of 1 small lung tissue measuring 6.5 x 2.8 x 2.0 cm with reddish-brown color and soft consistency.

Clinical Pathology:

BUN: 17 mg/dL (6-20 mg/dL), Creatinine: 0.9 mg/dL (0.7-1.3 mg/dL), Glucose: 105 mg/dL (70-100 mg/dL), LDH : 240 IU/L (15-225 IU/L), Na: 142.2 mmol/L (135-145 mmol/L), K: 3.9 mmol/L (3.5-5.1 mmol/L), RBC: 5.53x10^6/uL (4.6-6.2x10^6/uL), Hb: 17.4 gm/dL (14.0-18.0 gm/dL), Hct: 51.8 % (40-54%), WBC: 6900/uL (4500-11000/uL), Lymphocyte: 25.4.8% (20.0-45.0%), Neutrophil: 60.0% (45.0-75.0%), monocyte:5.0% (0.0-9.0%). Ethyl alcohol 227mg/dl, AST: 47U/L (40-50 U/L), ABG showed pH=7.402, pCO2=33.6, pO2=76.1, HCO3=22.1 under O2 nasal 3L/min

Case Number: 431

CASE RESULT:

Histopathologic Findings:

The alveolar structures of the lung are partly well preserved and areas dilated. The dilated alveoli are lined by pneumocytes and full of homogenous deep-pink materials in the alveolar spaces. Focal needle-like clefts and hemorrhage are also noted. Areas of the alveoli contain some or many histiocytes. Focal lymphocytes aggregate is also noted. The blood vessels including the capillaries in the alveolar wall show congestion. No significant micro-organism is noted.

Immunohistochemistry and histochemistry:

The lung tissue showed positive staining for CD68 and PAS, but negative staining for GMS, acid-fast stain, Gram stain and mucicarmine.

Differential diagnosis:

1. Pulmonary edema.
2. Pneumocystis jiroveci pneumonia (PJP)
3. Acute respiratory distress syndrome (ARDS)
4. Pulmonary alveolar proteinosis (PAP).

Diagnosis: pulmonary alveolar proteinosis.

Comments:

Pulmonary alveolar proteinosis (PAP) also known as pulmonary alveolar phospholipoproteinosis, is a rare lung disease in which abnormal accumulation of phospholipoproteinaceous material occurs within the alveoli, interfering with gas exchange. PAP was first described by Rosen et al. in 1958. It is an unusual lung disease of unknown etiology and variable natural history. The phospholipoproteinaceous material is composed principally of the phospholipid surfactant and surfactant apoproteins.

PAP occurs in three clinically distinct forms: Genetic, auto-immune (also called idiopathic or primary), and secondary. The genetic form comprises a heterogeneous group of disorders caused by mutations in the genes encoding surfactant protein B or C or the receptor for granulocyte-macrophage colony stimulating factor (GM-CSF) Primary PAP is associated with presence of anti- GM-CSF antibodies preventing uptake of surfactant proteins by alveolar macrophages resulting in their accumulation. Idiopathic PAP has been a fascinating disorder since its initial description in 1958. Incidence reported in the literature has been estimated to be 0.37 per 100,000 persons.

Secondary pulmonary alveolar proteinosis develops in association with conditions involving

functional impairment or reduced numbers of alveolar macrophages. Such conditions include some hematologic cancers, inhalation of inorganic dust (e.g. silica) or toxic fumes and certain infections.

Although the cause of PAP remains obscure, a major breakthrough in the understanding of the etiology of the disease came by the chance observation that mice bred for experimental study to lack a hematologic growth factor known as GM-CSF developed a pulmonary syndrome of abnormal surfactant accumulation resembling human PAP.

Current estimates suggest an incidence of PAP to be one in two million people. The series reported in the literature suggest a male preponderance (male:female ratio 3:1), and 72 % have a history of smoking. Peak onset is in the third or fourth decade of life with over 80% of reported cases occurring in this age group. The median age at the time of diagnosis is 39 years; However, there are reports of the disease occurring in neonates, children, and the elderly.

Dyspnea is the most common presenting symptom (79%). It usually occurs on moderate exertion but in a few patients occurs at rest. Cough is the other common symptom (75%). 17% of PAP reported hemoptysis, and 13% reported chest pain.

A low grade fever may also occur as a consequence of PAP in the absence of secondary infection.

The signs on physical examination can be unremarkable, but there are inspiratory crackles, cyanosis, and digital clubbing in a small percentage of patients.

The major complication of PAP is infection with unusual organisms such as Aspergillus species, Nocardia species, Mycobacterium species, Cryptococcus neoformans, Histoplasma capsulatum, Pneumocystis jiroveci pneumonia (PJP) and viruses. Other complications of PAP include interstitial fibrosis, pneumothorax, respiratory failure, and cor pulmonale. The development of interstitial fibrosis in patients with PAP has been reported in isolated cases.

Laboratory tests may be normal or may reveal polycythemia, hyperglobulineamia, or an elevated serum lactate dehydrogenase level.

Accumulation of phospholipoproteinaceous material in the alveoli results in a non-specific radiographic pattern of air space consolidation. There are no ancillary signs or specific features of the distribution of the consolidation to suggest the diagnosis of PAP on the basis of radiographic appearances alone. High resolution computed tomographic (HRCT) scans of the thorax demonstrate the expected appearance of widespread air space consolidation, but also thickened interlobular septa, clearly visible within the affected lung and producing the so called “crazy paving” pattern. It was initially suggested that the crazy paving pattern in geographical areas of pulmonary opacification were specific for PAP. However, other conditions, most notably lipoid pneumonia and bronchioalveolar cell carcinoma, can sometimes mimic the CT features usually associated with PAP.

Diagnosis is generally made by surgical or endoscopic biopsy of the lung, revealing the distinctive pathologic finding. The current gold standard of PAP diagnosis involves histopathological examination of alveolar specimens obtained from bronchoalveolar lavage and transbronchial lung biopsy.

An ELISA to measure antibodies against GM-CSF has been validated for routine clinical

diagnosis of autoimmune PAP. Numerous studies have characterised the intra-alveolar material obtained following bronchoalveolar lavage in patients with PAP. The major constituent of the lavage fluid is phospholipid, mainly lecithin, the main component of surfactant. The lavage material also contains serum proteins and surfactant specific proteins including increased concentration of surfactant protein A (SP-A) and surfactant protein D.

The diagnosis of PAP can be made with confidence on the basis of the appearance of the lung on the HRCT scan of the thorax in conjunction with an examination of lavage fluid obtained from segmental alveolar lavage. Examination by light microscopy is adequate but ultrastructural analysis by electron microscopy strengthens the diagnosis.

The gross pathological findings in PAP are patchy areas of yellow consolidation with an oily substance exuding from abraded surfaces. The classical finding on light microscopy is filling of the alveoli and terminal bronchioles with a granular lipoproteinaceous substance which stains a deep pink with periodic acid Schiff (PAS) stain. The alveolar architecture is usually well preserved although septal thickening from edema or lymphocytic infiltration has been observed. The main histomorphologic differential diagnosis is pulmonary edema, which does not have dense bodies.
Whole lung lavage is the safest and most effective form of treatment for PAP and the overall prognosis is good. Over 60% of patients have a good response within two lung washes per lung. The major risks of whole lung lavage concern the correct placement of the double lumen endobronchial tube with overspill of lavage fluid into the ventilated lung being the main risk.

Historically, treatment has included corticosteroids, potassium iodide, and streptokinase with variable success. Ambroxol stimulates the intracellular formation and secretion of surfactant and, although this would be expected to exacerbate the intra-alveolar accumulation of surfactant, there is a single report of improvement in one patient following treatment. Aerosolised trypsin has been used to treat PAP on the grounds that trypsin would hydrolyse the proteinaceous material and hence improve clearance. Some of the patients treated with trypsin developed an allergic reaction and there is the potential for proteolytic damage. However, none of these studies was controlled and the response observed in some patients may represent the spontaneous improvement that is seen in up to 25% of cases. More recent developments such as treatment with GM-CSF are reported.

Pulmonary function tests can be used to assess disease severity, progression, and response to treatment. Arterial blood gas tensions, alveolar-arterial oxygen gradients, and change in P(A–a)o2 gradient on exercise are better predictors of disease severity and functional impairment

Conclusion:

PAP represents a syndrome with a number of possible etiologies. The appearances on the HRCT scan of the thorax will often suggest the diagnosis and should be confirmed by examination of bronchoalveolar lavage fluid. Whole lung lavage appears to be the most effective form of treatment and is a safe technique in experienced hands. The overall prognosis is excellent with treatment. A few patients are resistant to whole lung lavage. It is important to investigate these non-responders further as they may respond to some of the more targeted treatments.

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Case Number: 432

Slide No.: KMU-12-20210

Slide view: http://140.112.96.83:82/CSCP/62CSCP/Case%20432/7055.svs/view.apml

Li Hung-Ru(李泓儒)[1] MD；Chen Yi-Ting(陳怡庭)[1] MD；Lin Shiou-Fu(林脩涪)[1] MD；Chai chee-yen(蔡志仁)[1,2] MD,Ph.D

[1]Department of pathology, Kaohsiung medical university Chung-Ho memorial hospital(高醫附設醫院病理科)

[2] Kaohsiung medical university(高雄醫學大學)

CASE HISTORY

Signalment: A 50-year-old female with a lung nodule found during health examination

Clinical History:

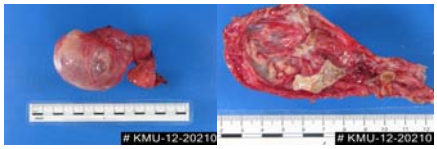
This 50-year-old female is seen in this hospital due to a lung nodule found accidentally during the health examination three months before presentation. She reported well before without any underlying disease. No congenital abnormally is told. There are no symptoms and sign, including fever, chills, cough, shortness of breathness, chest discomfort, anorexia or loss of body weight noted. She denied personal habits of smoking, alcohol drinking and drug abuse.She reported no family history of lung cancer or familial congenital disease.She was admitted for further evaluation. Blood laboratory examination revealed no abnormalities (the data was shown below).Chest X-ray and computed-tomography showed a giant bullae over the right middle lobe. Surgical resection was advised and she received the thoracoscopic wedge resection of right middle lobe. The pathologic diagnosis was shown below. She was discharged 6 days after the operation.

Clinical pathology:

WBC：6000/uL　RBC：5.4x10^6 /uL　Hgb：12.6 g/dL　HCT：38.9%　MCV：72fl
PLT：254000/uL　Neutrophil：53.8%　Eosinophil：2.4%　Basophil：0.4%
Lymphocyte：38.0%　PT：11.6 second　PTT：24.7 second　AST：21 IU/L　CRP：<0.2 mg/L
BUN：9.8 mg/dL　CREA：0.44 mg/dL　Na：141 mmol/L　K：3.5 mmol/L

Gross Findings:

The specimen submitted consisted of one lung tissue in one bad, measuring 11.2x6.5x6.2cm in size, in fresh state. One huge bulla measuring 9.5x6.5x6.5cm in size is seen. On opening, clear serous fluid was drainaged. The cystic wall was thin without septum.



Case Number: 432

CASE RESULT

Histopathologic Findings:

Sections show a single large cystic lesion lined with ciliated pseudostratified tall columnar cells. Small bronchus, muscular bundles, and focal calcification were seen. No neoplastic cells were identified during the sections. The acid-fast stain fail to demonstrate the possible mycobacterium .Grocott's methenamine silver(GMS) stain and Periodic acid–Schiff(PAS) stain disclose no fungal hyphae and spores.

Differential Diagnosis:

1. Congenital bullae or blebs
2. Bronchopulmonary sequestration
3. Centrilobular emphysema
4. Pneumatoceles
5. Bronchogenic cyst
6. Lymphangioleiomyomatosis
7. Infections, including bacterial and fungal infection
8. Bronchogenic carcinomas

Diagnosis:

Congenital pulmonary airways malformation, type 2

Discussion:

Cysts or cavities of lung are commonly encountered in chest radiography and computed tomography. However, most cases are acquired or being secondary to other diseases. Congenital cystic lesions of the lung are a rare condition. The most common malformations of the lower respiratory tract are congenital pulmonary airways malformation (CPAM), also known as Congenital cystic adenomatoid malformation(CCAM) . The reported incidence of CPAM ranges from 1 in 11,000 to 1 in 35,000 live births, with a higher incidence in the midtrimester due to spontaneous resolution. There are currently five main types of CCAM, which differ based on the embryologic level of origin and the histological features. Type 2 CPAM account for 20~25% of cases and arise from terminal bronchioles. They are composed of smaller cysts, measuring 0.5 to 2 cm, as well as solid areas that may be difficult to distinguish from surrounding tissue. These are lined by ciliated cuboidal or columnar epithelium, and elements of bronchioles or alveoli may be seen. Type 2 CPAMs have the highest incidence of associated anomalies, up to 60%, and prognosis depends on these findings. Malignant transformation (bronchioloalveolar carcinoma or pleuropulmonary blastomas) is associated with this entities of abnormalities. Most cases of CPAMs

are diagnosed during the perinatal period, and being rare in the adults. CPAM in adults may be accompanied by aspergillus infection and occurs in bilateral lobes of lung. The treatment of asymptomatic CPAM remains controversial. Some recommends a non-operative approach with a long-term clinical and radiological following, whereas other favours a preventive surgical excision.

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Case Number: 433
Slide No.: S140598-3
Slide view: http://140.112.96.83:82/CSCP/62CSCP/Case%20433/7060.svs/view.apml

Liang, Chung-Tiang (梁鍾鼎)[a] , DVM, PhD；Ke, Jia - Ling (柯佳伶)[a] , DVM； Chen, Yu- Ling (陳幼岭)[a] , DVM, MS
National Laboratory Animal Center , National Applied Research Laboratories (國家實驗動物中心)[a]

CASE HISTORY:
Signalment: BALB/cByJ mouse, S140-598-3, male, 4.5- month-old

Clinical History:
The mouse of this case had no clinical signs. Before routine health monitoring the mouse was euthanized by CO2 asphyxiation.

Gross Findings:
Retroperitoneal abdominal enlarged mass (2 X 2 X 1 cm) was noted. Irregular mass connected to the serosa of abdominal organs are noted.

Case Number: 433

CASE RESULT:

Histopathologic Findings:

These tumor cells are chiefly around and attach to the serosa of abdominal organs. Tumor cells typically have moderate to abundant amounts of granular or filamentous eosinophilic cytoplasm with distinct cross-striations. Various proportions of large pleomorphic strap-like cells, spindle-shaped cells, or round cells with one or two eccentrically located nuclei are present.

Differential Diagnosis:

1.Malignant schwannoma
2.Malignant fibrous histiocytoma
3. Leiomyosarcoma

Diagnosis: Rhabdomyosarcoma, retroperitoneal cavity

Discussion:

This is a rare spontaneous tumor in mice and those of skeletal muscle occur more often than those of the heart. However, it can be induced experimentally by exposure to a variety of viruses, metals, and chemical carcinogens. The phosphotungstic acid-hematoxylin (PTAH) stain is suitable for identification of cellular cross-striations. The demonstration of Z-lines in electron micrographs can be a further aid to diagnosis. Myoglobin is a specific marker for rhabdomyosarcoma. Cellular cross-striations are detectable; greater pleomorphism of the tumor cells including strap and racket cells.

Malignant schwannoma usually shows positive S-100 protein immunoreactivity. Variable proportions of Antoni type A tissue with Verocay bodies or Antoni type B tissue with cystic spaces can be present; the cells have typical wavy, buckled, or comma-shaped nuclei. Malignant fibrous histiocytoma shows storiform or cartwheel arrangement of the tumor cells; negative immunostaining for desmin and positive immunoreactivity for histiocytic markers such as cathepsin B, α-1-antitrypsin (AT) and α-1-antichymotrypsin (ACT). As a further diagnostic aid, most leiomyosarcomas have a positive immunohistochemical staining for desmin and smooth muscle actin. Leiomyosarcomas are rare in mice and usually have been found in the uterus, but occur in the urinary bladder and in the intestine as well. *Trp53/Fos* double knockout mice were generated. These mice develop highly proliferative and invasive rhabdomyosarcomas of the facial and orbital regions, with more than 90% penetrance at 6 months of age.

Rhabdomyosarcomas (RMS) have an incidence of about 50% of all soft-tissue sarcomas and 10% of all malignant solid tumours in children**.** They include two major histological variants, termed embryonal (ERMS) and alveolar (ARMS), and a less common pleomorphic (PRMS) variant. ERMS are more responsive to treatments and make up to 80% of RMS in children of less than 10 yrs of age. ERMS may occur in any body district and are heterogeneous in terms of histological

appearance, ranging from poorly to highly differentiated lesions, virtually resembling the multi-step process of embryonic muscle differentiation. ARMS, instead, are characterized by poorer prognosis and are mainly detected in the trunk and body extremities in adolescents and adults. ARMS cells resemble lung alveoli, with clusters of eosinophilic tumour cells arranged loosely and disposed in an alveolar pattern. PRMS are rare and mainly found in adults, and typically have a poor clinical outcome.

References:

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Case Number: 434
Slide No.: CSCP-1
Slide view: http://140.112.96.83:82/CSCP/62CSCP/Case%20434/7061.svs/view.apml

Pei-Yi Chu.（朱旆億）, MD, PhD.
Department of Pathology, St. Martin De Porres Hospital（天主教聖馬爾定醫院病理科）.

CASE HISTORY：
Signalment: A 77-year-old male

Clinical History:

A 77-year-old male transferred from other hospital with presentation of anterior mediastinal tumor with left pleural seeding. No obvious major history was mentioned. Regular laboratory data was unremarkable. VATS (Video-assisted thracoscopic) excision of tumor was performed. The specimen was sent to pathology lab for diagnosis.

Gross Findings：

The mass lesion submitted consisted of five pieces of soft tissue fragment with grayish in color on sections, measured up to 1.3 x 0.5 x 0.3 cm in size. All for sections are taken.

Case Number: 434

CASE RESULT：

Histopathologic Findings：

Microscopically, sections show polygonal shaped tumor cells with granular cytoplasm arranged in alveolar (zellballen) and trabecular architectures with occasionally encountered solid architectures. Increased vascular network is also noted.

Immunohistochemistry：

Immunohistochemical study, these tumor cells show immunoreactivity for Chromogranin-A, NSE, CD56, and S-100 and display negative for TTF-1, Inhibin-A, EMA, Hep-Par-1, p63, CK5/6, Calretinin, and CD5.

Differential Diagnosis：

4. Mediastinal paraganglioma with pleural metastasis
5. Renal cell carcinoma.
6. Hepatocellular carcinoma.
7. Malignant pheochromocytoma with pleural metastasis.

Diagnosis：Malignant pheochromocytoma with pleural metastasis.

Discussion：

Malignant adrenal pheochromocytoma is a malignant tumor composed of chromaffin cells of the adrenal medulla. Malignant pheochromocytoma are currently defined by the presence of metastases; however, this definition does not account for the potentially lethal behavior of tumors showing extensive local infiltration into adjacent organs or major blood vessels.

The synonyms of malignant adrenal pheochromocytoma include malignant paraganglioma, malignant chromaffinoma, pheochromocytoma with malignant features, pheochromocytoma with atypical features, and atypical pheochromocytoma. The last two diagnostic terms “pheochromocytoma with atypical features” and “atypical pheochromocytoma” are not suggested to use for the possibility to neglect the malignancy.

Microscopic examination usually shows predominantly alveolar (zellballen) or trabecular architecture, or a mixture of the two. Diffuse of solid architecture can also be seen. Specific diagnosis is usually based on morphology and confirmed by immunohistochemistry. Classic histochemical techniques chromaffin reaction and silver stains are not specific and should be abandoned.

As for immunohistochemical studies, pheochromocytomas are positive for chromogranin A, the most reliable marker for discriminating them from adrenal cortical tumors and metastatic tumors that are not neuroendocrine. The absence of positivity for epithelial membrane antigen (EMA) helps distinguish pheochromocatyoma from renal cell carcinoma.

Age and sex distribution for malignant pheochromocytoma are not different from benign pheochromocytoma. Malignant pheochromocytomas compose of up to 10% of all pheochromocytomas. Familial syndromes combined with benign or malignant pheochromocytomas can occasionally-encountered. Catecholamine excess and the degree of hypertension may be more marked in the patient with metastatic pheochromocytoma. Patients with metastatic disease may have symptoms from mass effect or paraneoplastic syndromes due to peptide hormone secretion.

There are usually remarkably elevated levels of serum and/or urine catecholamines, norepinephrine, epinephrine, metanephrine, normetanephrine, dopamine, vanillylmandelic acid (VMA), or other metabolites. It has been suggested that dopamine values specifically may correlate with malignant pheochromocytoma. Serum chromogranin A may be useful in monitoring the progression of disease.

When metastatic deposits develop, the regional lymph nodes are most often affected, followed by the axial skeleton, liver, lung, and kidney. Malignant pheochromocytomas may also show local invasion with capsular and periadrenal adipose connective tissue. Vascular invasion can also be noted. Metastasis can occur without presence of local invasion.

A number of histologic criteria have been identified in malignant pheochromocytoma, but no one histologic featureis uniquely able to identify a tumor that will behave in an aggressive clinical fashion. Among the many criteria, vascular invasion, capsular invasion, profound pleomorphism, and nuclear hyperchromasia are statistically more predictive of poor prognostic outcome.

Since there are no universally accepted morphological criteria for the prediction of pheochromocytoma, the clinical course of benign pheochromocytoma is largely depended on the successful surgical resection without residual tumor and management of complications of hypertension. The prognosis of malignant pheochromocytoma is usually poor.

References：

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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。

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 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)

比較病理研討會病例分類一覽表

中華民國比較病理學會
第一次至第六十次比較病理學研討會病例分類一覽表

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

			2. Old schistosomiasis of rectum		
	71.	9	Myelolipoma	Human	台北耕莘醫院
腫瘤	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 strain rats	台灣省農業藥物毒物試驗所
	81.	10	Angiomyolipoma	Human	羅東博愛醫院
	82.	10	Inverted papilloma of prostatic urethra	Human	省立新竹醫院
	84.	10	Nephrogenic adenoma	Human	國泰醫院
	86.	10	Multiple myeloma with systemic amyloidosis	Human	佛教慈濟綜合醫院
	87.	10	Squamous cell carcinoma of renal pelvis and calyces with extension to the ureter	Human	台北病理中心
	88.	10	Fibroepithelial polyp of the ureter	Human	台北耕莘醫院
	90.	10	Clear cell sarcoma of kidney	Human	台北醫學院
	93.	11	Mammary gland adenocarcinoma, complex type , with chondromucinous differentiation	Dog	台灣大學獸醫學系
	94.	11	1. Breast, left, modified radical mastectomy, showing papillary carcinoma, invasive 2. Nipple, left, modified radical mastectomy, papillary carcinoma, invasive 3. Lymph node, axillary, left, lymphadenectomy, palillary carcinoma, metaststic	Human	羅東聖母醫院
	95.	11	Transmissible venereal tumor	Dog	中興大學獸醫學系
	96.	11	Malignant lymphoma, large cell type, diffuse, B-cell phenotype	Human	彰化基督教醫院
	97.	11	Carcinosarcomas	Tiger	台灣養豬科學研究所
	98.	11	Mucinous carcinoma with intraductal carcinoma	Human	省立豐原醫院
	99.	11	Mammary gland adenocarcinoma, type B, with pulmonary metastasis, BALB/cBYJ mouse	Mouse	國家實驗動物繁殖及研究中心
	100.	11	Malignant fibrous histiocytoma and paraffinoma	Human	中國醫藥學院
	102.	11	Pleomorphic adenoma (benign mixed tumor)	Human	佛教慈濟綜合醫院
腫瘤	103.	13	Atypical central neurocytoma	Human	新光吳火獅紀念醫院
	104.	13	Cardiac schwannoma	SD rat	國家實驗動物繁殖及研究中心
	109.	13	Desmoplastic infantile ganglioglioma	Human	高雄醫學院

腫瘤	107.	13	1.Primary cerebral malignant lymphoma 2.Acquired immune deficiency syndrome	Human	台北市立仁愛醫院
	111.	13	Schwannoma	Human	三軍總醫院
	114.	13	Osteosarcoma	Dog	美國紐約 動物醫學中心
	115.	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
	116.	14	Krukenberg's Tumor	Human	台北病理中心
	117.	14	Primary insular carcinoid tumor arising from cystic teratoma of ovary.	Human	花蓮慈濟綜合醫院
	119.	14	Polypoid adenomyoma	Human	大甲李綜合醫院
	120.	14	Gonadal stromal tumor	Human	耕莘醫院
	122.	14	Gestational choriocarcinoma	Human	彰化基督教醫院
	123.	14	Ovarian granulosa cell tumor	Horse	中興大學獸醫學系
	129.	15	Kaposi's sarcoma	Human	華濟醫院
	131.	15	Basal cell carcinoma (BCC)	Human	羅東聖母醫院
	132.	15	Transmissible venereal tumor	Dog	臺灣大學獸醫學系
	137	17	Canine Glioblastoma Multiforme in Cerebellopontine Angle	Dog	中興大學 獸醫病理研究所
	143	18	Osteosarcoma associated with metallic implants	Dog	紐約動物醫學中心
	144	18	Radiation-induced osteogenic sarcoma	Human	花蓮慈濟綜合醫院
	145	18	Osteosarcoma, osteogenic	Dog	臺灣大學獸醫學系
	146	18	Pleomorphic rhabdomyosarcoma	Human	行政院衛生署 新竹醫院
	147	18	Papillary Mesothelioma of pericardium	Leopard	屏東科大學獸醫學系
	148	18	Cystic ameloblastoma	Human	台北醫學院
	149	18	Giant cell tumor of bone	Canine	中興大學獸醫學院
	150	18	Desmoplastic small round cell tumor (DSRCT)	Human	華濟醫院
	152	18	Hepatocellular carcinoma	Human	羅東聖母醫院
	158	20	Hemangiopericytoma	Human	羅東聖母醫院
	160	20	Cardiac fibroma	Human	高雄醫學大學 病理學科
	166	21	Nephroblastoma	Rabbit	紐約動物醫學中心
	168	21	Nephroblastoma	Pig	台灣動物科技研究所
	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

腫瘤	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	Lymphoma	彰化基督教醫院 病理科
	213	30	Lymphoma, multi-centric type	Dog	中興大學獸醫系
	214	30	CD30 (Ki-1)-postitive anaplastic large cell lymphoma (ALCL)	Human	新光醫院病理科
	215	30	Lymphoma, mixed type	Koala	台灣大學獸醫學系
	217	30	Mucosal associated lymphoid tissue (MALT) lymphoma, small intestine	Cat	臺灣大學獸醫學 研究所
	218	31	Nasal type NK/T cell lymphoma	Human	高雄醫學大學病理科
	222	31	Acquired immunodeficiency syndrome (AIDS)with disseminated Kaposi's sarcoma	Human	慈濟醫院病理科
	224	32	Epithelioid sarcoma	Human	彰化基督教醫院 病理科
	226	32	Cutaneous B cell lymphoma , eyelid , bilateral	Human	羅東聖母醫院病理科
	227	32	Extramammary Paget's disease (EMPD) of the scrotum	Human	萬芳北醫皮膚科 病理科
	228	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
	231	34	Malignant melanoma, metastasis to intra-abdominal cavity	Human	財團法人天主教 耕莘醫院病理科
	232	34	Vaccine-associated rhabdomyosarcoma	Cat	台灣大學獸醫學系
	233	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
	235	34	1. Neurofibromatosis, type I 2. Malignant peripheral nerve sheath tumor (MPNST)	Human	花蓮慈濟醫院病理科
	239	35	Glioblastoma multiforme	Human	羅東聖母醫院
	240	35	Pineoblastoma	Wistar rat	綠色四季
	241	35	Chordoid meningioma	Human	高醫病理科
	243	35	Infiltrating lobular carcinoma of left breast with meningeal carcinomatosis and brain metastasis	Human	花蓮慈濟醫院病理科
	245	35	Microcystic Meningioma.	Human	耕莘醫院病理科
	247	36	Well-differentiated fetal adenocarcinoma without lymph node metastasis	Human	新光吳火獅紀念醫院

腫瘤	249	36	Adenocarcinoma of lung.	Human	羅東聖母醫院
	252	36	Renal cell carcinoma	Canine	國立台灣大學獸醫學系獸醫學研究所
	253	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
	256	37	Metastatic adrenal cortical carcinoma	Human	耕莘醫院病理科
	258	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
	262	38	Medullar thyroid carcinoma	Canine	臺灣大學獸醫學系
	264	39	Merkel cell carcinoma	Human	羅東博愛醫院
	266	39	Cholangiocarcinoma	Human	耕莘醫院病理科
	268	39	Sarcomatoid carcinoma of renal pelvis	Human	花蓮慈濟醫院病理科
	269	39	Mammary Carcinoma	Canine	中興大學獸醫學系
	270	39	Metastatic prostatic adenocarcinoma	Human	耕莘醫院病理科
	271	39	Malignant canine peripheral nerve sheath tumors	Canine	臺灣大學獸醫學系
	272	39	Sarcomatoid carcinoma, lung	Human	羅東聖母醫院
	273	40	Vertebra,T12,laminectomy, metastatic adenoid cystic carcinoma	Human	彰化基督教醫院
	274	40	rhabdomyosarcoma	Canine	臺灣大學獸醫學系
	275	40	Fetal rhabdomyosarcoma	SD Rat	中興大學獸醫學系
	276	40	Adenocarcinoma, metastatic, iris, eye	Human	高雄醫學大學
	277	40	Axillary lymph node metastasis from an occult breast cancer	Human	羅東博愛醫院
	278	40	Hepatocellular carcinoma	Human	國軍桃園總醫院
	279	40	Feline diffuse iris melanoma	Faline	中興大學獸醫學系
	280	40	Metastatic malignant melanoma in the brain and inguinal lymph node	Human	花蓮慈濟醫院病理科
	281	41	Tonsil Angiosarcoma	Human	羅東博愛醫院
	282	41	Malignant mixed mullerian tumor	Human	耕莘醫院病理科
	283	41	Renal cell tumor	Rat	中興大學獸醫學系
	284	41	Multiple Myeloma	Human	花蓮慈濟醫院病理科
	285	41	Myopericytoma	Human	新光吳火獅紀念醫院
	287	41	Extramedullary plasmacytoma with amyloidosis	Canine	臺灣大學獸醫學系
	288	42	Metastatic follicular carcinoma	Human	羅東聖母醫院病理科
	289	42	Primitive neuroectodermal tumor (PNET), T-spine.	Human	羅東博愛醫院病理科
	292	42	Hemangioendothelioma of bone	Human	花蓮慈濟醫院病理科
	293	42	Malignant tumor with perivascular epithelioid differentiation, favored malignant PEComa	Human	彰化基督教醫院
	297	43	Mucin-producing cholangiocarcinoma	Human	基隆長庚醫院
	300	43	Cutaneous epitheliotropic lymphoma	Canine	臺灣大學

					獸醫專業學院
	301	43	Cholangiocarcinoma	Felis Lynx	臺灣大學 獸醫專業學院
	302	43	Lymphoma	Canine	臺灣大學 獸醫專業學院
	303	43	Solitary fibrous tumor	Human	彰化基督教醫院
	304	43	Multiple sarcoma	Canine	臺灣大學 獸醫專業學院
	306	44	Malignant solitary fibrous tumor of pleura	Human	佛教慈濟綜合醫院暨 慈濟大學
	307	44	Ectopic thymic carcinoma	Human	彰濱秀傳紀念醫院 病理科
	308	44	Medullary carcinoma of the right lobe of thyroid	Human	彰化基督教醫院病 理科
	309	44	Thyroid carcinosarcoma with cartilage and osteoid formation	Canine	臺灣大學 獸醫專業學院
	312	44	Lymphocytic leukemia/lymphoma	Koala	臺灣大學 獸醫專業學院
	313	45	Neuroendocrine carcinoma of liver	Human	佛教慈濟綜合醫院暨 慈濟大學
	314	45	Parachordoma	Human	羅東博愛醫院病理科
腫瘤	315	45	Carcinoma expleomorphic adenoma, submandibular gland	Human	天主教耕莘醫院 病理科
	316	45	Melanoma, tongue	Canine	國立臺灣大學 獸醫專業學院
	317	45	Renal cell carcinoma, papillary type	Canine	國立臺灣大學 獸醫專業學院
	323	46	Metastatic papillary serous cystadenocarcinoma, abdomen	Human	國軍桃園總醫院
	324	46	Malignant gastrointestinal stromal tumor	Human	天主教耕莘醫院
	329	47	Sclerosing stromal tumor	Human	彰化基督教醫院
	330	47	Pheochromocytoma	Human	天主教耕莘醫院
	334	48	Metastatic infiltrating ductal carcinoma, liver	Human	佛教慈濟綜合醫院
	335	48	Adenoid cystic carcinoma, grade II, Rt breast	Human	天主教耕莘醫院
	336	48	Malignant lymphoma, diffuse, large B-cell, right neck	Human	林新醫院
	337	48	Pulmonary carcinoma, multicentric	Dog	國立臺灣大學 獸醫專業學院
	338	48	Malignant melanoma, multiple organs metastasis	Rabbit	國立中興大學 獸醫學院
	340	49	Mucinous-producing urothelial-type adenocarcinoma of prostate	Human	天主教耕莘醫院
	342	49	Plexiform fibromyxoma	Human	彰化基督教醫院

腫瘤	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 lymphangiomyomatosi	Human	高雄醫學大學附設 中和紀念醫院病理科
	365	52	Angiosarcoma, skin (mastectomy)	Human	天主教耕莘醫院 病理科
	366	52	Rhabdomyoma (Purkinjeoma), heart	Swine	屏東縣家畜疾病 防治所
	368	52	Langerhans cell sarcoma, lung	Human	高雄醫學大學附設 中和紀念醫院病理科
	369	52	Biliary cystadenocarcinoma, liver	Camel	國立屏東科技大學獸 醫教學醫院病理科
	371	52	Malignant melanoma, nasal cavity	Human	羅東博愛醫院病理科
	373	53	Malignant giant cell tumor of tendon sheath	Human	天主教耕莘醫院 病理科
	376	53	Malignant mesothelioma of tunica vaginalis	Golden hamster	中興大學獸醫病理生 物學研究所
	377	53	Perivascular Epithelioid Cell Tumor (PEComa) of the uterus	Human	彰化基督教醫院 病理部
	378	53	Medullary carcinoma	Human	高雄醫學大學病理部
	389	55	Mantle cell lymphoma involving ascending colon, cecum, ileum, appendix and regional lymph nodes with hemorrhagic necrosis in the colon and leukemic change.	Human	奇美醫院病理部
	390	55	Pulmonary Squamous Cells Carcinoma of a	Dog	國立屏東科技大學

			Canine		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
腫瘤	403	57	Non-secretory multiple myeloma with systemic amyloidosis	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	404	57	1. Hepatocellular adenocarcinoma, multifocal, severe, liver 2. Hemorrhage, moderate, acute, body cavity 3. Bumble foot, focal, mild, chronic, food pad 4. cyst and atherosclerosis, chronic, testis	Goose	國立中興大學獸醫病理生物學研究所
	406	57	Castleman’s disease	Human	羅東博愛醫院
	407	58	Hepatoid adenocarcinoma of colon with multiple liver metastases	Human	羅東博愛醫院
	408	58	Cardiac and pulmonary melanoma	Pig	國立中興大學獸醫病理生物學研究所
	409	58	Double Tumors: (1) small cell carcinoma of lung (2) Hodgkin’s lymphoma, mixed cellularity type. Acrokeratosis paraneoplastica	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	410	58	Von Hippel–Lindau disease	Human	奇美醫院病理部
	411	58	Multiple neoplasia	Tiger	國立屏東科技大學獸醫教學醫院病理科
	412	58	Hepatocellular carcinoma and multiple myeloma	Human	中山醫學大學醫學系病理學科暨附設醫院病理科
	413	59	DEN plus AAF carcinogens induced hepatic tumor in male rats	Rat	中興大學獸醫病理生物學研究所
	417	59	Alveolar soft part sarcoma	Human	高雄醫學大學附設中和紀念醫院病理科

	418	60	Seminoma associated with supernumerary testicles	Human	羅東博愛醫院
	422	61	Retinoblastoma in a baby girl	Human	彰化基督教醫院
	423	61	Colloid goiter in a female Radiated tortoise (*Astrochelys radiata*)	Tortoise	台灣大學獸醫專業學院分子暨比較病理生物學研究所
	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
細菌	6.	1	Tuberculosis	Monkey	臺灣大學獸醫學系
	7.	1	Tuberculosis	Human	省立新竹醫院
	12.	2	H. pylori-induced gastritis	Human	台北病理中心
	13.	2	Pseudomembranous colitis	Human	省立新竹醫院
	26.	3	Swine salmonellosis	Pig	中興大學獸醫學系
	27.	3	Vegetative valvular endocarditis	Pig	台灣養豬科學研究所
	28.	4	Nocardiosis	Human	台灣省立新竹醫院
	29.	4	Nocardiosis	Largemouth bass	屏東縣家畜疾病防治所
	32.	4	Actinomycosis	Human	台灣省立豐原醫院
	33.	4	Tuberculosis	Human	苗栗頭份為恭紀念醫院
	53.	7	Intracavitary aspergilloma and cavitary tuberculosis, lung.	Human	羅東聖母醫院
	54.	7	Fibrocalcified pulmonary TB, left Apex. Mixed actinomycosis and aspergillosis lung infection with abscess DM, NIDDM.	Human	林口長庚紀念醫院
	58.	7	Tuberculous enteritis with perforation	Human	佛教慈濟綜合醫院
	61.	8	Spirochetosis	Goose	國立嘉義農專獸醫科
	63.	8	Proliferative enteritis (*Lawsonia intracellularis* infection)	Porcine	屏東縣家畜疾病防治所
	68.	9	Liver abscess (Klebsillae pneumoniae)	Human	台北醫學院
	77.	10	Xanthogranulomatous inflammation with nephrolithiasis, kidney, right. Ureteral stone, right.	Human	羅東聖母醫院
	79.	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
	108.	13	Listeric encephalitis	Lamb	屏東縣家畜疾病防治所
	113.	13	Tuberculous meningitis	Human	羅東聖母醫院
	134.	16	Swine salmonellosis with meningitis	Swine	中興大學獸醫學系
	135.	16	Meningoencephalitis, fibrinopurulent and lymphocytic, diffuse, subacute, moderate, cerebrum, cerebellum and brain stem,	Swine	國家實驗動物繁殖及研究中心

			caused by Streptococcus spp. infection		
	140	17	Coliform septicemia of newborn calf	Calf	屏東縣家畜疾病防治所
	161	20	Porcine polyserositis and arthritis (Glasser's disease)	Pig	中興大學獸醫學院
	162	20	Mycotic aneurysm of jejunal artery secondary to infective endocarditis	Human	慈濟醫院病理科
	170	21	Chronic nephritis caused by Leptospira spp	Pig	中興大學獸醫學院
	173	21	Ureteropyelitis and cystitis	Pig	中國化學製藥公司
	254	36	Pulmonary actinomycosis.	Human	耕莘醫院病理科
	259	37	Tuberculous peritonitis	Human	彰化基督教醫院病理科
	260	38	Septicemic salmonellosis	Piglet	屏東科技大學獸醫系
	261	38	Leptospirosis	Human	慈濟醫院病理科
	267	39	Mycobacteriosis	Soft turtles	屏東科技大學獸醫系
	290	42	*Staphylococcus* spp. infection	Formosa Macaque	中興大學獸醫病理學研究所
	291	42	Leptospirosis	Dog	台灣大學獸醫學系
	296	43	Leptospirosis	Human	花蓮慈濟醫院
	305	43	Cryptococcus and Tuberculosis	Human	彰濱秀傳紀念醫院
	319	46	Placentitis, Coxiella burnetii	Goat	台灣動物科技研究所
	321	46	Pneumonia, Buirkholderia pseudomallei	Goat	屏東縣家畜疾病防治所
細菌	339	48	Mycoplasmosis	Rat	國家實驗動物中心
	352	50	Chromobacterium violaceum Septicemia	Gibbon	Bogor Agricultural University, Indonesia
	353	50	Salmonellosis	Pig	國立中興大學獸醫學院
	367	52	Melioidosis (Burkholderia pseudomallei), lung	Human	花蓮慈濟醫院
	370	52	Suppurative bronchopneumonia (*Bordetellae trematum)* with *Trichosomoides crassicauda* infestation	Rat	國立中興大學獸醫學院
	374	53	Pulmonary coccidiodomycosis	Human	彰化基督教醫院
	375	53	Paratuberculosis in Macaca cyclopis	Macaca cyclopis	國立屏東科技大學獸醫學院
	379	53	Bovine Johne's disease (BJD) or paratuberculosis of cattle	Dairy cow	屏東縣家畜疾病防治所
	380	53	NTB, Mycobacterium abscessus	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	382	54	Leptospirosis	Pig	國立屏東科技大學獸醫學院
	384	54	Neisseria Infected Pneumonitis	Cat	中興大學獸醫學系
	385	54	Mycobacteria avian complex dacryocyctitis	Human	花蓮佛教慈濟綜合醫

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	387	54	Swine Erysipelas	Pig	屏東縣家畜疾病防治所
	396	56	Suppurative meningitis caused by Streptococcus spp in pigs	Pig	國立中興大學獸醫病理生物學研究所
	399	56	Listeric encephalitis in dairy goats	Goat	屏東縣家畜疾病防治所
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
	110.	13	Pseduorabies	Piglet	國立屏東科技大學
	112.	13	Avian encephalomyelitis	Chicken	國立中興大學
	128.	15	Contagious pustular dermatitis	Goat	屏東縣&台東縣家畜疾病防治所
	130.	15	Fowl pox and Marek’s disease	Chicken	中興大學獸醫學系
	133.	16	Japanese encephalitis	Human	花蓮佛教慈濟綜合醫院
	136	17	Viral encephalitis, polymavirus infection	Lory	美國紐約動物醫學中心
	138	17	1. Aspergillus spp. encephalitis and myocarditis 2. Demyelinating canine distemper encephalitis	Dog	台灣大學獸醫學系
	153	19	Enterovirus 71 infection	Human	彰化基督教醫院
	154	19	Ebola virus infection	African Green monkey	行政院國家科學委員會實驗動物中心
	155	19	Rabies	Longhorn Steer	台灣大學獸醫學系
	163	20	Parvoviral myocarditis	Goose	屏東科技大學

					獸醫學系
	199	28	SARS	Human	台大醫院病理科
	200	28	TGE virus	swine	臺灣動物科技研究所
	201	28	Feline infectious peritonitis(FIP)	Feline	台灣大學獸醫學系
	209	30	Chicken Infectious Anemia (CIA)	Layer	屏東防治所
病毒	219	31	1. Lymph node:Lymphdenitis, with lymphocytic depletion and intrahistiocytic basophilic cytoplasmic inclusion bodies. Etiology consistent with Porcine Circovirus(PCV)infection. 2. Lung: Bronchointerstitial pneumonia,moderate, lymphoplasmacytic, subacute.	Pig	臺灣動物科技研究所
	220	31	Cytomegalovirus colitis	Human	彰化基督教醫院 病理科
	221	31	Canine distemper virus Canine adenovirus type ll co-infection	Canine	國家實驗動物 繁殖及研究中心
	223	32	1. Skin, mucocutaneous junction (lip): Cheilitis, subacute, diffuse, sever, with epidermal pustules, ballooning degeneration, proliferation, and eosinophilic intracytoplasmic inclusion bodies, Saanen goat. 2. Haired skin: Dermatitis, proliferative, lymphoplasmacytic, subacute, diffuse, sever, with marked epidermal pustules, ballooning degeneration, acanthosis, hyperkeratosis, and eosinophilic intracytoplasmic inclusion bodies.	Goat	台灣動物科技研究所
	238	35	Hydranencephaly	Cattle	國立屏東科技大學 獸醫學系
	248	36	Porcine Cytomegalovirus (PCMV) infection	Swine	國立屏東科技大學 獸醫學系
	250	36	Porcine respiratory disease complex (PRDC) and polyserositis, caused by co-infection with pseudorabies (PR) virus, porcine circovirus type 2 (PCV 2), porcine reproductive and respiratory syndrome (PRRS) virus and *Salmonella typhimurium*.	Swine	屏東縣家畜疾病防所
病毒	255	37	Vaccine-induced canine distemper	gray foxes	國立台灣大學 獸醫學系
	265	39	Bronchointerstitial pneumonia (PCV II infection)	Swine	台灣大學獸醫學系
	295	42	Feline infectious peritonitis (FIP)	Cat	中興大學獸醫病理所
	362	51	Canine distemper virus infection combined pulmonary dirofilariasis	Dog	國家實驗研究院
	381	54	Polyomavirus infection of urinary tract	Human	羅東博愛醫院

	405	57	Porcine circovirus-associated lymphadenitis	Swine	國立屏東科技大學 獸醫教學醫院病理科
	414	59	Rabies virus infection	Human	佛教慈濟綜合醫院暨 慈濟大學病理科
	415	59	Canine distemper virus infection	Dog	台灣大學 獸醫專業學院 分子暨比較病理生物 學研究所
	420	60	Respiratory syncytial virus infection	Human	佛教慈濟綜合醫院暨 慈濟大學病理科
	421	60	Porcine epidemic diarrhea (PED)	Piglet	國立中興大學獸醫病 理生物學研究所
黴菌	23.	3	Chromomycosis	Human	台北病理中心
	47.	7	Lung: metastatic carcinoma associated with cryptococcal infection. Liver: metastatic carcinoma. Adrenal gland, right: carcinoma (primary)	Human	三軍總醫院
	48.	7	Adiaspiromycosis	Wild rodents	台灣大學獸醫學系
	52.	7	Aspergillosis	Goslings	屏東縣家畜疾病 防治所
	53.	7	Intracavitary aspergilloma and cavitary tuberculosis, lung.	Human	羅東聖母醫院
	54.	7	Fibrocalcified pulmonary TB, left Apex. Mixed actinomycosis and aspergillosis lung infection with abscess DM, NIDDM.	Human	林口長庚紀念醫院
	105.	13	Mucormycosis Diabetes mellitus	Human	花蓮佛教慈濟綜合醫 院
	127.	15	Eumycotic mycetoma	Human	花蓮佛教慈濟綜合醫 院
	138	17	1. Aspergillus spp. encephalitis and myocarditis 2. Demyelinating canine distemper encephalitis	Dog	台灣大學獸醫學系
	298	43	Systemic Candidiasis	Tortoise	中興大學獸醫學院
黴菌	318	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	Cat	國立臺灣大學

			infection, Skin		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
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
	106.	13	Parasitic meningoencephalitis, caused by Toxocara canis larvae migration	Dog	臺灣養豬科學研究所
	139	17	Disseminated strongyloidiasis	Human	花蓮佛教慈濟綜合醫院
	141	17	Eosinophilic meningitis caused by Angiostrongylus cantonensis	Human	台北榮民總醫院 病理檢驗部
	156	19	Parastrongylus cantonensis infection	Formosan gem-faced civet	中興大學獸醫學院
	157	19	Capillaria hepatica, Angiostongylus cantonensis	Norway Rat	行政院農業委員會 農業藥物毒物試驗所
	202	29	Colnorchiasis	Human	高雄醫學院附設醫院
	203	29	Trichuriasis	Human	彰化基督教醫院
寄生蟲	204	29	Psoroptes cuniculi infection (Ear mite)	Rabbit	農業藥物毒物試驗所
	205	29	Pulmonary dirofilariasis	Human	和信治癌中心醫院
	206	29	Capillaries philippinesis	Human	和信治癌中心醫院
	207	29	Adenocarcinoma with schistosomiasis	Human	花蓮佛教慈濟綜合醫院
	286	41	Etiology- consistent with *Spironucleus* (*Hexamita*) *muris*	Rat	國家實驗動物繁殖及研究中心
	327	46	Dermatitis, mange infestation	Serow	中興大學獸醫學院
	328	46	Trichosomoides crassicauda, urinary bladder	Rat	國家實驗動物中心
	362	51	Canine distemper virus infection combined pulmonary dirofilariasis	Dog	國家實驗研究院
	370	52	Suppurative bronchopneumonia (*Bordetellae trematum)* with *Trichosomoides crassicauda*	Rat	國立中興大學 獸醫學院

			infestation		
	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
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
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
	118.	14	Cystic endometrical hyperplasia	Dog	臺灣養豬科學研究所
	121.	14	Cystic subsurface epithelial structure (SES)	Dog	國科會實驗動物中心
	124.	15	Superficial necrolytic dermatitis	Dog	美國紐約 動物醫學中心
	125.	15	Solitary congenital self-healing histiocytosis	Human	羅東博愛醫院
	126.	15	Alopecia areata	Mouse	國家實驗動物 繁殖及研究中心
	142	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
	159	20	Hypertrophic cardiomyopathy	Pig	台灣大學獸醫學系
其它	165	21	Chinese herb nephropathy	Human	三軍總醫院 病理部及腎臟科
	167	21	Acute pancreatitis with rhabdomyolysis	Human	慈濟醫院病理科
	171	21	Malakoplakia	Human	彰化基督教醫院
	183	25	Darier's disease	Human	高雄醫學大學病理科
	191	27	1. Polyarteritis nodosa 2. Hypertrophic Cardiomyopathy	Feline	台灣大學獸醫學系
	193	27	Norepinephrin cardiotoxicity	Cat	台中榮總
	196	27	Cardiomyopathy (Experimental)	Mice	綠色四季
	212	30	Kikuchi disease (histiocytic necrotizing lymphandenitis)	Lymphandenitis	耕莘醫院病理科
	225	32	Calcinosis circumscripta, soft tissue of the right thigh, dog	Dog	台灣大學獸醫所
	230	34	Hemochromatosis, liver, bird	Bird	台灣大學獸醫學系
	234	34	Congenital hyperplastic goiter	Holstein calves	屏東縣家畜疾病防治所
	236	34	Hepatic lipidosis (fatty liver)	Rats	中興大學獸醫學 病理學研究所
	237	35	Arteriovenous malformation (AVM) of cerebrum	Human	耕莘醫院病理科
	244	35	Organophosphate induced delayed neurotoxicity in hens	Hens	中興大學獸醫學 病理學研究所
	257	37	Severe lung fibrosis after chemotherapy in a child with Ataxia- Telangiectasia	Human	慈濟醫院病理科
	294	42	Arteriovenous malformation of the left hindlimb	Dog	台灣大學獸醫學系

	299	43	Polioencephalomalacia	Goat kid	屏東家畜疾病防治所
	310	44	Hyperplastic goiter	Piglet	屏東家畜疾病防治所
	311	44	Melamine and cyanuric acid contaminated pet food induced nephrotoxicity	Rat	中興大學獸醫學病理學研究所
	318	45	Alfatoxicosis	Canine	國立臺灣大學獸醫專業學院
	333	47	Lordosis, C6 to C11	Penguin	國立臺灣大學獸醫專業學院
	341	49	Pulmonary placental transmogrification	Human	羅東博愛醫院
	345	49	Acute carbofuran intoxication	Jacana	國立中興大學獸醫學院
	350	50	Malakoplakia, liver	Human	慈濟綜合醫院暨慈濟大學
	351	50	Eosionphilic granuloma, Right suboccipital epidural mass	Human	羅東博愛醫院病理科
	359	51	Eosinophilic granuloma with fungal 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
其他	383	54	Langerhans cell histiocytosis	Human	聖馬爾定醫院病理科
	388	54	Canine protothecosis	Dog	國立臺灣大學獸醫專業學院
	392	55	Lithium nephrotoxicity	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	398	56	Gamma-knife-radiosurgery-related demyelination	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	400	56	Canine Disseminated form Granulomatous Meningoencephalitis (GME)	Dog	國立屏東科技大學獸醫教學醫院病理科
	419	60	Mucopolysaccharidosis	Cat	國立中興大學獸醫病理生物學研究所
	426	61	Phleboliths in a man	Human	台北醫學大學附設醫院口腔外科口腔病理科
	427	61	Visceral gout in a Green iguana (*Iguana iguana*)	Iguana	中興大學獸醫病理生物學研究所

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
國立中興大學 獸醫病理生物學研究所
廖俊旺 教授實驗室
助理 吳昭慧
sosia3342@gmail.com
04-22840894 轉 315
402 台中市南區國光路 250 號 動物疾病診斷中心 3F 305 室

----------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

會電腦編號

<table>
<tr><td rowspan="3">姓名</td><td>中文</td><td></td><td rowspan="2">姓別</td><td rowspan="2">□ 男
□ 女</td><td>出生</td><td>民國　年　月　日</td><td rowspan="3">出生地</td><td rowspan="3"></td></tr>
<tr><td rowspan="2">身份証</td><td rowspan="2"></td></tr>
<tr><td>英文</td><td></td><td colspan="4">會員身份：□一般 □學生 □贊助</td></tr>
<tr><td rowspan="4">學歷</td><td colspan="3">(1)</td><td colspan="5">稱謂(圈選) 先生 小姐 醫師 獸醫師 教授 博士
研究員 主任 其他:</td></tr>
<tr><td colspan="3">(2)</td><td rowspan="3">研究興趣</td><td colspan="4">(1)</td></tr>
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永久：　　電話　　傳真：

電子信箱(E-mail)：</td></tr>
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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

申請人　　簽章

介紹人　　簽章

介紹人　　簽章

中華民國　　年　　月　　日</td><td>審核結果</td></tr>
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