

## **AMR SEMINARS: LIST OF CASES (GROUPING OF CASES PER SEMINAR)**

(\* = Publication in Advances in Anatomic Pathologic –AMR Series).

### **SEMINAR 1**

1. Primary neuroendocrine carcinoma of the uterus (S Suster).
2. Pleomorphic adenoma (mixed tumor) of the male breast (S Ramon y Cajal).
3. Extraskelatal Ewing's sarcoma, primary in the lung (peripheral neuroectodermal tumor) (CA Moran).
4. Retroperitoneal malignant "triton" tumor (rhabdomyosarcoma plus malignant schwannoma) (M Huszar).
5. Gonadoblastoma of the ovary (G Schibi-Brilliant).
6. Kimura's disease involving soft tissue of the neck (JKC Chan).
7. Gouty tophus of the skin (MA Hurt).
8. Dyshormonogenic goiter (A Sara).
9. Placental site trophoblastic tumor (GA Herrera).
10. Malignant phyllodes tumor with spindle cell and liposarcomatous elements (IJ Bleiweiss).

## **SEMINAR 2**

1. Keratin globules in lymph node in a patient with squamous cell carcinoma (S Suster).
2. Cutaneous myofibroma of the foot (N Cartagena, Jr).
3. Pulmonary blastoma with trophoblast-type giant cells (CA Moran).
4. Papillary eccrine adenoma of the skin (TT Holland).
5. Ductal carcinoma in situ of the breast versus papillary carcinoma (A Sara).
6. Mesenchymal chondrosarcoma of soft tissue vs extraosseous osteosarcoma (J Lamovec).
7. Goblet cell carcinoid of the ovary (IJ Bleiweiss).
8. Soft tissue-large cell lymphoma with unusual myxoid stroma (JKC Chan).
9. Metanephric adenoma of the kidney (JKC Chan).
10. Metastatic lobular carcinoma of the breast to ovary (LA Moral).
11. Retromastoid melanotic progonoma of infancy (SJ Melnick).
12. Benign lymphangioendothelioma of skin (MA Hurt).
13. Acantholytic squamous cell carcinoma, pigmented, of the skin of nose (S Ramon y Cajal).

### **SEMINAR 3**

1. Residual intraductal and infiltrating duct carcinoma of the breast with chemotherapy induced changes (IJ Bleiweiss).
2. Myositis ossificans of the thigh (N Cartagena).
3. Cervical cryptococcal lymphadenitis (JKC Chan).
4. Keratin globules of the ovary (JKC Chan).
5. Cutaneous sporotrichosis (TT Holland).
6. Fibrous histiocytoma of the skin (giant dermatofibroma) (MA Hurt).
7. Xanthogranuloma of the skin (J Lamovec).
8. Rhabdoid tumor of the lung (SJ Melnick).
9. Carcinoma arising in mixed tumor (carcinoma ex-pleomorphic adenoma) of the parotid (LA Moral)
10. Progressive multifocal leukoencephalopathy of the brain (LA Moral).
11. Spindle cell thymoma of the mediastinum (CA Moran).
12. Gliosarcoma with lipomatous differentiation cerebello-pontine angle (S Ramon y Cajal).
13. Angioblastic meningioma (hemangioblastoma variant) of the cerebellopontine angle (A Sara).
14. Hürthle cell tumor with necrosis of the thyroid, secondary to FNA (S Suster).
15. Mucinous meningioma of the brain (S Suster).

#### **SEMINAR 4**

1. Black thyroid due to minocycline (IJ Bleiweiss).
2. Metastatic hemangiopericytoma of meninges (angioblastic meningioma) to pleura and paravertebral area (IJ Bleiweiss).
3. Follicular lymphoma of the parotid secondary to Dilantin (N Cartagena, Jr).
4. Penicillium marneffrei infection of the colon (JK.C Chan).
5. Epithelioid angiosarcoma of deep soft tissue (CDM Fletcher).
6. Sinus histiocytosis with massive neck lymphadenopathy (G Herrera).
7. Clear cell chondrosarcoma of femoral head (J Lamovec).
8. Malignant fibrous histiocytoma of the lung (SJ Melnick).
9. Chordoma-like primary soft tissue sarcoma (parachordoma) (M Miettinen).
10. Sinus histiocytosis with massive lymphadenopathy of the meninges of the brain (LA Moral).
11. Liposarcoma of the anterior mediastinum (CA Moran).
12. Malignant tumor of probable neuroectodermal origin of the orbit (S Ramon y Cajal).
13. Well-differentiated adenocarcinoma simulating fetal lung (pulmonary blastoma) (A Sara).
14. Malignant hemangiopericytoma (S Suster).
15. EBV-associated B-cell lymphoma of the placenta (GJ Berry).

## **SEMINAR 5**

1. Large cell lymphoma with sclerosis of the ovary (GJ Berry).
2. Metastatic paraganglioma in lymph nodes (IJ Bleiweiss).
3. Follicular small cleaved cell lymphoma of the lymph node (N Cartagena).
4. Medullary thyroid carcinoma, pseudopapillary variant (JKC Chan).
5. True histiocytic lymphoma/interdigitating reticulum cell sarcoma of the small intestine (CDM Fletcher).
6. Solid, cystic and papillary tumor of the pancreas (J Goldstein).
7. Metaplastic synovial cyst of the skin (MA Hurt).
8. Variant of fibroma of tendon sheath with disturbing pleomorphism of the finger (J Lamovec).
9. Combined germ cell / sex-cord-epithelial tumor of the ovary (SJ Melnick).
10. Periosteal chondrosarcoma, with myxoid features, grade 2, of femur (M Miettinen).
11. Microcystic meningioma (LA Moral).
12. Benign solitary fibrous tumor of the pleura (CA Moran).
13. Neurocytoma of the brain (A Sara).
14. Rhabdomyosarcoma with mixed embryonal and alveolar features of the soft tissue (JZ Sickel).
15. Tubular adenoma with atypical epithelial hyperplasia of the breast (S Suster).
16. Retroperitoneal intra-abdominal desmoplastic small round cell tumor (LM Weiss).

## **SEMINAR 6**

1. Epithelioid hemangioendothelioma of the lung (GJ Berry).
2. 2A. Ovary infiltrated by malignant melanoma (IJ Bleiweiss).  
2B. Prostatic chips infiltrated by poorly differentiated adenocarcinoma with signet ring cell differentiation (IJ Bleiweiss).
3. Sarcomatous transformation of a choroid plexus carcinoma of the right lateral ventricle (N Cartagena).
4. Diffuse large cell lymphoma of B-lineage, with prominent fibrillary matrix and rosettes, of lymph node (JKC Chan).
5. Malignant rhabdoid of the temporo-parietal (V Eusebi).
6. Follicular dendritic reticulum cell tumor of the lymph node (CDM Fletcher).
7. Collision tumor of the ovary: 1) papillary serous adenocarcinoma; 2) rhabdomyosarcoma (J Goldstein).
8. Metastatic adenocarcinoma of the umbilicus (MA Hurt).
9. Epithelioid sarcoma of soft tissue (J Lamovec).
10. Infantile myofibromatosis of the mandible (SJ Melnick).
11. Intra-abdominal desmoplastic small round cell tumor (M Miettinen).
12. Tanycytic ependymoma of the spinal cord (LA Moral).
13. Metastatic malignant melanoma of the lung (CA. Moran).
14. Solitary plasmacytoma of nasal cavity (S Ramon y Cajal).
15. Epimyoeipithelial carcinoma of the parotid (S Suster).
16. Synovial sarcoma of the thigh (JZ Sickel).
17. Embryonal carcinoma of the abdomen (S Suster).
18. Monocytoid B-cell lymphoma of lymph node (LM Weiss).

## **SEMINAR 7**

1. Overlap ALCL/HD of the lymph node (GJ Berry).
2. Chondroblastoma, probably recurrent (IJ Bleiweiss).
3. Spleen with paraimmunoblastic variant of small lymphocytic lymphoma/leukemia (N Cartagena).
4. Littoral cell angioma of the spleen (JKC Chan).
5. Cystic islet cell tumor of the pancreas (V Eusebi).
6. Angiomyofibroblastoma of the vulva (CDM Fletcher).
7. Measles appendicitis (J Goldstein).
8. Ectopic ductal carcinoma of the breast arising in the axilla (MA Hurt).
9. Medullary carcinoma of the thyroid with oxyphilic and "squamoid" features (J Lamovec).
10. Astroblastoma of the brain (SJ Melnick).
11. Ossifying fibromyxoid tumor, malignant of the soft tissue –arm (M Miettinen).
12. Giant cell vasculitis involving left Fallopian tube (LA Moral).
13. Paraganglioma of the lung (CA Moran).
14. Spindle cell tumor - ? Dendritic reticulum cell sarcoma of the liver (S Ramon y Cajal).
15. Subcutaneous myxopapillary ependymoma of the sacrococcygeal region (G Schibi-Brilliant).
16. Cutaneous Ki-1 (+) large cell lymphoma of T-cell lineage of the neck and vulva (JZ Sickel).
17. Sarcomatoid carcinoma vs angiosarcoma of the kidney (S Suster).
18. ?Possible "rhabdoid" variant of GIST of the stomach (LM Weiss).

## **SEMINAR 8**

1. Congenital cystic lymphangiectasia of the lung (GJ Berry).
2. Foreign body reaction to silicone of the breast (M Hurt).
3. Plexiform fibrohistiocytic tumor of the abdominal skin (S Suster).
4. Epithelioid hemangioendothelioma of the brain (JKC Chan).
5. Benign "triton" tumor of the vagina (V Eusebi).
6. Infiltrating glomus tumor of soft tissue (CDM Fletcher).
7. Unusual glandular proliferation (metaplastic vs. hyperplastic vs carcinoma) of the cervix (MJ Gaffey).
8. Atypical apocrine lesion of the breast (MA Hurt).
9. Metastatic sarcomatoid carcinoma of the right humerus, of probable renal origin (J Lamovec).
10. Medullomyoblastoma (S Melnick).
11. True histiocytic lymphoma of small intestine (M Miettinen).
12. Intraventricular malignant meningotheiomatous and secretory meningioma (LA Moral).
13. Mediastinal multilocular thymic cyst with incidental seminomatous component (CA Moran).
14. Mucous cell adenoma of the bronchial glands (S Ramon y Cajal).
15. Biphasic neoplasm of the mediastinum (A Sara).
16. Lymphoepithelioma-like carcinoma of the uterine cervix (JZ Sickel).
17. Retroperitoneal metastatic embryonal carcinoma with sarcomatous transformation (S Suster).
18. Unclassifiable malignant neoplasm of the liver (LM Weiss).

## SEMINAR N. 9

1. Kawasaki disease (GJ Berry).
2. Glomus tumor of stomach (JJ Bleiweiss).
3. Metastatic hidroadenocarcinoma (N Cartagena).
4. Cutaneous lymphadenoma (JKC Chan).
5. Diffuse pulmonary lymphangiomas (TV Colby).
6. Papillary carcinoma of the thyroid, macrofollicular variant (V Eusebi).
7. Low grade myxofibrosarcoma (CDM Fletcher).
8. Epithelioid hemangiosarcoma of the thyroid (J Lamovec).
9. Partially differentiated cystic nephroblastoma (SJ Melnick).
10. Splenic large B-cell lymphoma with a red pulp distribution (M Miettinen).
11. Pleomorphic xanthoastrocytoma (LA Moral).
12. Epithelioid hemangioendothelioma of the anterior mediastinum with osteoclast-type giant cells (C Moran).
13. Pulmonary hydatidosis (S Ramon y Cajal).
14. Dedifferentiated liposarcoma (A Sara).
15. Malignant mixed tumor of the bronchial glands (G Schibi-Brilliant).
16. Primary yolk sac carcinoma of the stomach (JZ Sickel).
17. Subcutaneous nodule on the arm composed of small round cells with round nuclei in a myxoid stroma – absent mitotic activity *no diagnosis* (S Suster).
18. ?Epithelioid leiomyosarcoma (LM Weiss).

## **SEMINAR N. 10**

1. Large B-cell lymphoma associated with unclassified sarcoma ("collision tumor") (GJ Berry).
2. C-cell hyperplasia of the thyroid (IJ Bleiweiss).
3. Tigroid degeneration of myocardium (N Cartagena).
4. Leigh's disease or subacute necrotizing encephalomyelopathy (JKC Chan).
5. Seminoma with cystic change in the thymus associated with epithelial proliferation (thymoma?) (TV Colby).
6. Malignant melanoma (interpreted as epithelioid angiosarcoma) (H Dominguez-Malagon).
7. Dedifferentiated chordoma (V Eusebi).
8. Leiomyoma with perinodular hydropic degeneration (CDM Fletcher).
9. Granular cell epulis (M Hurt).
10. Adult neuroblastoma, differentiating, ?primary retroperitoneal, with metastases to omentum & ovaries. Ganglioneuromatous differentiation in the metastasis to the retroperitoneal lymph node (J Lamovec).
11. Ki-1 lymphoma vs lymphocytic depletion Hodgkin's disease (SJ Melnick).
12. Giant cell tumor of tendon sheath, cellular variant (M Miettinen).
13. Meningeal sarcoma (LA Moral).
14. Embryonal carcinoma (or yolk sac tumor) of the mediastinum (CA Moran).
15. Adenocarcinoma of prostate plus "adenoid basal cell" carcinoma (S Ramon y Cajal).
16. Irradiated low grade glioma vs radiation changes (A Sara).
17. Gliomatosis peritonei (J Z Sichel).
18. Sarcoma, NOS (S Suster).
19. Epithelioid monophasic synovial sarcoma (N Weidner).
20. Hepatocellular carcinoma with neuroendocrine features (LM Weiss).

## **SEMINAR N. 11**

1. Kikuchi's disease (GJ Berry).
2. Synovial chondromatosis of temporo-mandibular joint (IJ Bleiweiss).
3. Leydig cell tumor (malignant) with unusual myxoid change (JKC Chan).
4. Myofibroblastic sarcoma (?) (H Dominguez-Malagon).
5. Central neurocytoma (V Eusebi).
6. Low-grade Dabskoid angiosarcoma (CDM Fletcher).
7. Non Hodgkin B-cell lymphoma (monocytoid with large neoplastic B-cell) rich in non neoplastic reactive T-cells (J Forteza Villa).
8. Various diagnoses: "undifferentiated malignant tumor" of the uterus, probably metastatic, with epithelioid morphology (T Krausz).
9. ?Unusual variant of non-small desmoplastic small round cell tumor (J Lamovec).
10. Littoral cell angiosarcoma of the spleen (M Miettinen).
11. Malignant mixed mullerian tumor of the vagina (LA Moral).
12. Schwannoma of the anterior mediastinum (CA Moran).
13. Desmoplastic fibroma (S Ramon y Cajal).
14. Mixed tumor of the breast (A Sara).
15. Inflammatory fibrosarcoma (SJ Melnick).
16. Extraskkeletal myxoid chondrosarcoma (JZ Sickel).
17. Cervico-mediastinal hemangiolympangiomas (S Suster).
18. Fetal-type hepatoblastoma vs adenoma (N Weidner).
19. "Aggressive" juvenile fibroadenoma (LM Weiss).
20. Polymorphous adenocarcinoma of minor salivary gland (B Wenig).

## **SEMINAR N. 12**

1. Iuxta-articular myxoma (PW Allen).
2. Giant cell myocarditis (GJ Berry).
3. Atypical polypoid adenomyoma of the uterus (M. Bisceglia)\*.
4. Ductal adenocarcinoma of heterotopic pancreas in pylorum (IJ Bleiweiss).
5. Granulomatous slack skin (N Cartagena).
6. Metachromatic leukodystrophy of the brain (JKC Chan).
7. Therapy-related changes in a carcinoid tumor (TV Colby).
8. Carcinosarcoma of the rete testis vs embryonal carcinoma with chondrosarcomatous elements (H Dominguez-Malagon).
9. Thymoma (V Eusebi).
10. "Myofibroblastoma with fatty component" (CDM Fletcher).
11. Scleroderma with atrophy of subcutaneous adipose tissue (T Krausz).
12. Endolymphatic stromal myosis & retroperitoneal metastasis having pseudoangiosarcomatous pattern of growth (J Lamovec).
13. High grade angiosarcoma of deep tissue (M Miettinen).
14. Giant cell granulomatous hypophysitis (LA Moral).
15. Primary rhabdomyosarcoma of the mediastinum (CA Moran).
16. Undifferentiated large cell carcinoma of the lung (S Ramon y Cajal).
17. Malignant mesenchymoma (A Sara).
18. Leishmania lymphadenitis (J Sickel).
19. Large cell anaplastic lymphoma secondary to chronic immunosuppression (JA Strauchen).
20. Epithelioid malignant schwannoma (S Suster).
21. Perineurioma (N Weidner).
22. Hairy cell leukemia in extralymphoid tissue (LM Weiss).

### **SEMINAR N. 13**

1. Ectopic hamartomatous thymoma (PW Allen).
2. Sparganosis of the brain (JKC Chan).
3. Malignant meningioma of the parapharyngeal space (H Dominguez-Malagon).
4. Pleomorphic invasive lobular carcinoma with apocrine differentiation (V Eusebi).
5. Neoplastic angioendotheliomatosis plus progressive multifocal leukoencephalopathy of the brain (J Forteza-Vila).
6. Undifferentiated malignant neoplasm (sarcoma, NOS ?) (CJ Goldenberg).
7. Inflammatory pseudotumor of the urinary bladder (J Goldstein).
8. Mikulicz disease plus Hodgkin's disease in parotid lymph node (T Krausz).
9. Benign peritoneal micro- and macro-cystic mesothelioma, with focal mural mesothelial proliferation (J Lamovec).
10. Chronic rejection of liver (S Ramon y Cajal).
11. Leprosy lymphadenitis (JA Strauchen).
12. ?Malignant mixed tumor of the salivary gland (S Suster).
13. Epithelioid angiosarcoma of the adrenal gland (BM Wenig).
14. Mesoblastic nephroma plus multicystic nephroma in adult (M Bisceglia)\*.

#### **SEMINAR N. 14**

1. Florid polymyositis in a case of upper motor neuron disease (GJ Berry).
2. Congenital mesoblastic nephroma (M. Bisceglia).
3. Lymphangiomyomatosis of lung (TV Colby).
4. ? Myofibroblastoma of breast (CDM Fletcher).
5. Giant cell tumor of pancreas (CJ Manivel).
6. Sarcomatoid renal carcinoma (M Miettinen).
7. Toxoplasmosis of the cerebellum in a HIV-patient (LA Moral).
8. Primary synovial sarcoma of mediastinum (CA Moran).
9. Malignant mesenchymoma (PP de Saint Maur).
10. Placental site trophoblastic tumor (JZ Sickel).
11. Malignant glomus tumor of the skin with widespread metastases in an immunosuppressed patient (S Suster).
12. Pleomorphic invasive lobular carcinoma of the breast (N Weidner).
13. Angiosarcoma of the peritoneum (LM Weiss).

## **SEMINAR N. 15**

1. Granulosa cell tumor of the ovary with florid mesothelial hyperplasia (PW Allen).
2. Malignant phyllodes tumor of breast with heterologous elements (IJ Bleiweiss).
3. Sclerosing adenosis of the prostate (JKC Chan).
4. Hyalinizing clear cell carcinoma of parotid vs epithelial-myoeithelial carcinoma (JKC Chan).
5. Spindle cell sarcoma of the thyroid (fibrosarcoma?) (H Dominguez-Malagon).
6. Squamous cell carcinoma of bladder with schistosoma hematobium (V Eusebi).
7. Malignant round cell tumor vs mediastinal sarcoma (malignant HPC) (J Forteza-Vila).
8. Neuroepithelioma vs malignant paraganglioma (CJ Goldenberg).
9. Meningeal hemangiopericytoma (J Lamovec).
10. Carcinoma of anal ducts (M Miettinen).
11. Alveolar adenoma of lung (C Moran).
12. Mesenchymal chondrosarcoma (S Ramon y Cajal).
13. Monocytic sarcoma (JA Strauchen).
14. Papillary carcinoma of the thyroid, columnar cell variant (BM Wenig).
15. Myelodysplastic syndrome with “red lips” eosinophil precursors (JKC Chan).

**SEMINAR N. 16.**

1. Carcinoid heart disease (GJ Berry).
2. Fibroepithelial tumor of breast with digital fibroma-like inclusions in stromal component (AP Dei Tos).
3. Mixed adrenocortical adenoma-pheochromocytoma (JA Ferreiro).
4. Giant cell tumor of soft tissues (CDM Fletcher).
5. ?Neoplastic malignant histiocytic process (J Goldstein).
6. Malignant mesothelioma, "lymphohistiocytic" variant (T Krausz).
7. Endometrial mullerian adenosarcoma (LA Moral).
8. Central chondrosarcoma, gr. III (H Molina-Kirsch).
9. Malignant mesenchymoma (PP de Saint Maur).
10. Castleman's disease with dendritic reticulum cell dysplasia (J Sickel).
11. Hodgkin's disease with synus histiocytosis with massive lymphadenopathy (DV Spagnolo).
12. Recurrent abdominal mesenteric fibromatosis (S Suster).
13. Collecting duct carcinoma of kidney (N Weidner).
14. Sclerosing Sertoli cell tumor (LM Weiss).

## **SEMINAR N. 17**

1. Nuchal fibroma (PW Allen).
2. Giant cutaneous trichilemmal horn (M Bisceglia).
3. Secondary chondrosarcoma of the digit (M Bisceglia)\*.
4. ?Peripheral T-cell lymphoma with erythrophagocytic histiocytosis in bone marrow (M Bisceglia).
5. ?Hemangiopericytoma of the stomach (IJ Bleiweiss).
6. Dysembrioplastic neuroepithelial tumor (JKC Chan).
7. Mycobacterial necrotizing lymphadenitis (K Cooper).
8. Malignant mesothelioma, "sarcomatous" type, with prominent lymphoid reaction (TV Colby).
9. Epithelioid angiosarcoma with alveolar pattern (H Dominguez-Malagon).
10. Acinic cell carcinoma of the parotid with thyroid-like pattern (V Eusebi).
11. Phyllodes tumor of the prostate (C Fisher).
12. Malignant spindle cell neoplasm (CJ Goldenberg).
13. Anaplastic large cell lymphoma CD30+ (J Lamovec).
14. "Black thyroid" in a case of cystic fibrosis (CJ Manivel).
15. Ectopic hamartomatous thymoma with carcinoma (M Michal).
16. Neuroblastoma-like neurilemmoma (A Nascimento).
17. Gaucher disease, type I (S Ramon & Cajal).
18. Polyvinyl-pirrolidone granuloma of the bone (JA Strauchen).
19. High grade sarcoma c/w malignant peripheral nerve sheath tumor vs a possible mucinous cystic neoplasm with associated sarcomatous stroma (BM Wening).

## **SEMINAR N. 18**

1. Hodgkin's disease mixed cellularity with multi-nucleated giant cells of Warthin-Finkeldey type (CE Bacchi).
2. Solitary fibrous tumor of the pleura with entrapped pulmonary parenchymal elements (GJ Berry).
3. Primitive choriocarcinoma of the urinary bladder (AP Dei Tos).
4. Adrenal oncocytoma vs oncocytic carcinoma (J Ferreiro).
5. Renal carcinoma and angiosarcoma ("collision tumor") (CDM Fletcher).
6. Alveolar rhabdomyosarcoma (J Forteza-Vila).
7. Hepatoid carcinoma of the ovary (J Goldstein).
8. Reticulum cell tumor with monoclonal gammopathy (M Michal).
9. Gastro-intestinal autonomic nerve cell tumor (GANT) (M Miettinen).
10. Post-traumatic neuroma (H Molina-Kirsch).
11. Glioblastoma, epithelioid-sarcomatoid type (LA Moral).
12. Inflammatory pseudotumor of the lymph-node (CA Moran).
13. Perineal nodular induration of the cyclist (atypical decubital fibroplasia and elastofibroma) (PP de Saint Maur).
14. Hepatic cysticercosis (JZ Sickel).
15. PNET vs metastatic neuroblastoma (DV Spagnolo).
16. Histiocytosis X of the lymph node "S-100 protein negative" (Langerhans' cell granulomatosis) (S Suster).
17. Inflammatory pseudotumor of the urinary bladder (pseudosarcomatous fibromyxoid tumor) (N Weidner).
18. Pleomorphic adenoma of lung (LM Weiss).

## **SEMINAR N. 19**

1. Atypical decubital fibroplasia (PW Allen).
2. Ossifying fibromyxoid tumor of soft parts (IJ Bleiweiss).
3. Myospherulosis (JKC Chan).
4. "Sclerosing hemangioma" of the lung (K Cooper).
5. Pulmonary capillary hemangiomatosis (TV Colby).
6. Amphicrine medullary carcinoma of thyroid with luminal differentiation (H Dominguez-Malagon).
7. Leiomyosarcoma with areas of rhabdomyoblastic differentiation (V Eusebi).
8. Parachordoma (C Fisher).
9. Thyroid lymphoma (CJ Goldenberg).
10. Leiomyoma with pregnancy associated changes vs leiomyosarcoma (T Krausz).
11. Whipple's disease (J Lamovec).
12. Meningioma with myxomatous and chordoma-like features (JC Manivel).
13. Solitary fibrous tumor of the meninges (A Nascimento).
14. Gangliocytic paraganglioma (S Ramon y Cajal).
15. Hodgkin's disease versus Hodgkin's disease-like Ki-1 positive ALC lymphoma (J Strauchen).
16. Malignant lymphoma with rosette formation (S Suster).
17. Heffner tumor (BM Wenig)\*.

## **SEMINAR N. 20**

1. Malignant ectomesenchymoma of soft tissues (CE Bacchi).
2. Pulmonary capillaritis in Wegener's granulomatosis (G Berry).
3. Littoral cell angioma of the spleen plus renal cell carcinoma plus angiomatous meningioma (M Bisceglia).
4. Ectomesenchymal chondromyxoid tumor of the tongue (JKC Chan).
5. Metanephric adenoma (JKC Chan).
6. Leiomyomatosis of the mediastinum (CDM Fletcher).
7. Anaplastic large cell lymphoma with high content of reactive histiocytes (J Goldstein).
8. (Giant) plexiform xanthomatous tumor (M Michal).
9. Epithelioid malignant schwannoma (M Miettinen).
10. Large cell lymphoma derived from MALT-oma of the breast (H Molina-Hirsch).
11. Gastro-intestinal myogenic stromal tumor with prominent myxoid matrix (CA Moran).
12. Liposarcoma (?surgically induced) (PP de Saint Maur).
13. Spindle cell (metaplastic) carcinoma of the breast with focal neural differentiation (J Sickel).
14. Extra-articular pigmented villo-nodular synovitis (?) (DV Spagnolo).
15. ?Monophasic synovial sarcoma of the retroperitoneum (S Suster).
16. Massive chondroid differentiation in fibrous dysplasia of bone (fibrocartilagineous dysplasia) vs fibrocartilaginous mesenchymoma of bone (N Weidner).
17. Malignant mastocytosis with myeloproliferative syndrome (LM Weiss).
- Quiz-case (1): Mycobacterial avium infection of the liver in a kestler (Falco Tinnunculus) (M Bisceglia).

## **SEMINAR N. 21**

1. Low grade fibromyxoid sarcoma (PW Allen).
2. Adenomyoepithelioma of the breast (IJ Bleiweiss).
3. Subcutaneous phycomycosis (TV Colby).
4. Angiomyolipoma of the liver (K Cooper).
5. Dedifferentiated chordoma (AP Dei Tos).
6. Glomus-like neuroendocrine carcinoma of the nasal cavity (H Dominguez-Malagon).
7. Monophasic synovial sarcoma (V Eusebi).
8. Non-Hodgkin's lymphoma in a Warthin's tumor (JA Ferreiro).
9. Ossifying fibromyxoid tumor with stromal cysts (C Fisher).
10. PNET vs rhabdoid tumor (J Forteza-Vila).
11. Granulocytic sarcoma (J Lamovec).
12. Amyloid tumor of the iliacus muscle (C Manivel).
13. *Angyostrongiloides Costarricensis* (H Molina-Hirsch).
14. Florid mesothelial hyperplasia (S Ramon & Cajal).
15. Gamma heavy chain disease (JA Strauchen).
16. Malignant, undifferentiated large cell neoplasm, NOS (BM Wenig).

## **SEMINAR N. 22**

1. Liver in a "tropical splenomegaly syndrome" (CE Bacchi).
  2. Bronchogenic cyst compressing ascending aorta and left coronary artery (GJ Berry).
  3. Hypertrophic cardiomyopathy in an infant (M Bisceglia).
  4. Tubular adenosis with DCIS (JKC Chan).
  5. Pancreatoblastoma (JKC Chan).
  6. Pleomorphic hyalinizing angiectatic tumor (CDM Fletcher).
  7. High grade neuroendocrine neoplasm vs metastatic amelanotic malignant melanoma (J Forteza-Vila).
  8. Intestinal endometriosis (CJ Goldenberg).
  9. Malignant mesothelioma -paratesticular (J Goldstein).
  10. Poorly differentiated angiosarcoma of the ovary (T Krausz).
  11. Salivary gland anlage tumor (M Michal).
  12. Retroperitoneal myolipoma (M Michal).
  13. Solitary fibrous tumor of upper respiratory tract (M Miettinen).
  14. Combined small cell neuroendocrine carcinoma of thymus with thymic carcinoid (CA Moran).
  15. Cellular schwannoma with necrotizing granulomas (A Nascimento).
  16. Toxic acute necrosis in a liver with Caroli's disease (PP de Saint Maur).
  17. Invasive ductal carcinoma of the breast with neuroendocrine differentiation (endometrioid-like glandular....) (J Sichel).
  18. Hyaline cell-rich chondroid syringoma (DV Spagnolo).
  19. Myxoid liposarcoma with prominent lymphangioma-like cystic degeneration (S Suster).
  20. Chondroid lipoma (N Weidner).
  21. Poorly differentiated retinoblastoma (LM Weiss).
- Quiz-case (1): Verruga peruana (S Suster).

### **SEMINAR N. 23**

1. "Eskimoma" (PW Allen).
  2. Pseudoangiomatous hyperplasia of the mammary stroma (IJ Bleiweiss).
  3. Hydatid cyst of the abdominal cavity (K Cooper).
  4. Intrahepatic cholangiocarcinoma (TV Colby).
  5. Rhodococcus equi infection in AIDS (TV Colby).
  6. Inflammatory leiomyosarcoma (AP Dei Tos).
  7. Epithelioid angiosarcoma of the breast (H Dominguez-Malagon).
  8. B-cell malignant lymphoma of the breast mimicking carcinoma (V Eusebi).
  9. Follicular dendritic cell sarcoma of the breast (C Fisher).
  10. Myeloid metaplasia of the breast (J Lamovec).
  11. Low grade endometrial stromal sarcoma vs metastatic adenocarcinoma in the uterus (H Molina-Hirsch).
  12. Chondroblastoma of the acetabulum (S Ramon y Cajal).
  13. Canine lymphoma (JA Strauchen).
  14. (?Burnt out primary in the testis with) metastases (?yolk sac tumor plus teratoma with a neuroepithelioma component) in the retroperitoneum and metastatic chondrosarcoma to the heart (S Suster).
  15. Sino-nasal HPC-like tumor (W Tsang).
  16. ?Epithelial neoplasm, ?Paraganglioma, ?Glomoid indeterminate tumor, ?CASTLE (B Wenig).
- Quiz-case (1): Metastasis to the bowel from large cell carcinoma (?lung) (J Goldstein).

## **SEMINAR N. 24**

1. Isolated form of Takayasu's arteritis (GJ Berry).
  2. Central core disease with structured cores (M Bisceglia)
  3. Inflammatory follicular dendritic cell tumor of liver ("inflammatory pseudotumor of the liver") (JKC Chan).
  4. Ependimoma, clear cell type plus papillary type (JKC Chan).
  5. Cortical thymoma/thymic carcinoma sequence (TV Colby).
  6. Cartilaginous hamartoma of the chest wall (CDM Fletcher).
  7. Inflammatory pseudotumor of the brain (J Forteza-Vila).
  8. Castleman disease (hyaline-vascular variant) with follicular dendritic cell stromal overgrowth (sarcoma) (M Michal).
  9. Talerman's tumor of the testis (M Michal).
  10. Undifferentiated (embryonal sarcoma) of the liver (M Miettinen).
  11. Pulmonary alveolar microlithiasis (CA Moran).
  12. Desmoplastic fibroblastoma (PP de Saint Maur).
  13. Invasive hydatidiform mole with associated malignant trophoblastic proliferation (JZ Sickel).
  14. Desmoplastic ganglioglioma, non-DIG type, in an adult (DV Spagnolo).
  15. ?Melanotic epithelioid schwannoma, ?malignant (S Suster).
  16. "Benign intramural glandulo-cystic proliferation" in the bowell (N Weidner).
  17. Solitary fibrous tumor of the kidney (LM Weiss).
- Quiz-case (1). Angiomyomatous hamartoma of the lymph node (M. Bisceglia).
  - Quiz case (2). Bilharzioma of the rectum (K Cooper).
  - Quiz case (3). Low grade myofibrosarcoma of the bone with rhabdoid inclusions (AM Gown).

## **SEMINAR N. 25**

1. Periosteal lipoma (PW Allen).
2. Oxyphilic clear cell carcinoma of the ovary (CE Bacchi).
3. ?Nodular fasciitis, ?Fibromatosis, involving the breast (IJ Bleiweiss).
4. Bilharzioma of the rectum (K Cooper).
5. Atypical teratoid/Rhabdoid tumor of the brain (AP Dei Tos).
6. Lymphoepithelioma-like anaplastic carcinoma of the thyroid (H Dominguez-Malagon).
7. Mesothelioma invading thyroid (V Eusebi).
8. Malignant glandular Triton tumor with neuroendocrine differentiation (C Fisher).
9. Byle duct cystadenoma vs metastatic adenocarcinoma (J Goldstein).
10. "Deep" pseudorheumatoid nodule (granuloma annulare) (T Krausz).
11. Congenital cystic adenomatoid malformation of the lung, type III (J Lamovec).
12. Pleomorphic large T/NK lymphoma of the face (H Molina-Hirsch).
13. HHV-8 related Castleman's disease in lymphnode & spleen in a HIV+ patient (S Ramon y Cajal).
14. T-cell rich large B-cell lymphoma (JA Strauchen).
15. Primary malignant mesothelioma of the spleen (W Tsang).
16. Intraductal oncocytic papillary neoplasm of the pancreas (B Wenig).

## **SEMINAR N. 26**

1. Enteropathy associated T-cell lymphoma (GJ Berry).
  2. Inflammatory pseudotumor of the kidney (M Bisceglia).
  3. Retroperitoneal lymphangiomyoma versus (renal) angiomyolipoma without adipocytic component (M Bisceglia).
  4. Fat embolism of the lung and kidney (JKC Chan).
  5. Ossifying fibromyxoid tumor (G Falconieri).
  6. Primary pigmented nodular adrenocortical disease (CDM Fletcher).
  7. Banti's syndrome (J Forteza-Vila).
  8. Polypoid mesothelioma of the colon (AM Gown).
  9. Well differentiated acinic cell carcinoma associated with lymphoid stroma (M Michal).
  10. Sex cord stromal tumor of the testis with features of the adult type of granulosa cell tumor (M Michal).
  11. Unclassified sarcoma of the lower limb, with intravenous growth pattern (M Miettinen).
  12. Low grade vascular proliferation with features of intraosseous hemangioma/epithelioid hemangioendothelioma (CA Moran).
  13. Crohn's disease of the appendix vs idiopathic granulomatous appendicitis (PP de Saint Maur).
  14. Spenic-gonadal fusion (JZ Sickel).
  15. Desmoplastic fibroblastoma or collagenous fibroma (DV Spagnolo).
  16. Unclassified fibromatous tumor, probably benign: probably a myxoid variant of desmoplastic fibroma (DV Spagnolo).
  17. Giant adenomatoid tumor of the uterus (S Suster).
  18. Benign lymphoepithelial cyst of the pancreas (LM Weiss).
- Quiz-case 1: Chondrosarcoma gr. I, metastatic to the skin of the nose (M Bisceglia).
  - Quiz-case 2: Xanthoma of the skin (N Weidner).
  - Quiz-case 3: Liver ischemic necrosis secondary to medical embolization (M Bisceglia).

## **SEMINAR N. 27**

1. Hyaline fibromatosis (PW Allen)\*.
  2. Congenital mediastinal teratoma with immature neural elements (IJ Bleiweiss).
  3. Anaplastic variant of spermatocytic seminoma with a high grade sarcoma demonstrating myogenic differentiation (K Cooper).
  4. Fibromatosis of the chest wall presenting as a pleural mass (TV Colby).
  5. Metastatic low grade endometrial stromal sarcoma from the pelvis (TV Colby).
  6. Spindle cell carcinoma (carcinosarcoma) of the esophagus with prominent basaloid differentiation (AP Dei Tos).
  7. Fibrolamellar (oncocytic) carcinoma of the liver with abundant cytoplasmic pale inclusions (H Dominguez-Malagon).
  8. Transitional cell carcinoma of the bladder merging with a large cell anaplastic carcinoma component, an invasive micropapillary component and oat cell carcinoma (V Eusebi).
  9. Lymphangiomatosis (C Fisher).
  10. Malignant paraganglioma with both conventional and sarcomatoid patterns (T Krausz).
  11. Sclerosing epithelioid fibrosarcoma vs malignant solitary fibrous tumor (J Lamovec).
  12. Primary melanoma originated in a cystic teratoma (H Molina-Hirsch).
  13. Meningioangiomatosis -a form of mixed glio-neuronal tumors (S Ramon y Cajal).
  14. Post-transplantation syndrome in lymph node (Castleman's multicentric disease plus Kaposi's sarcoma) related to KSHV (JA Strauchen).
  15. Unusual renal cell carcinoma with tubulo-papillary features, unclassified (S Suster).
  16. Clear cell epithelioid smooth muscle tumor of low grade malignant potential (S Suster).
  17. Combined renal cell oncocytoma and angiomyolipoma (W Tsang).
  18. Sarcomatoid carcinoma of the parotid (B Wenig).
- Quiz case (1). Chronic clofazimine therapy effect (T Colby).

## **SEMINAR N. 28**

1. Mucinous cystadenocarcinoma of the breast (CE Bacchi).
  2. Intra-arterial tumor emboli of the lung (G Berry).
  3. Chester-Erdheim disease of the brain (case A) and bone (case B) (M Bisceglia)\*.
  4. Prototheca zopfii infection of the skin (JKC Chan).
  5. Light chain disease associated with plasmacytoma (?lymph node) (JKC Chan).
  6. Undifferentiated embryonal sarcoma of the liver (I Damjanov).
  7. Papillary carcinoma of the thyroid within follicular tumor (O Dietze).
  8. Onchocerca volvulus infection of the skin (G Falconieri).
  9. Hyalinized spindle cell lesion c/w intrapulmonary solitary fibrous tumor (G Falconieri).
  10. Fatal Kikuchi's disease versus LES (J Forteza-Vila).
  11. Recurrent superficial angiomyxoma vs lobular nerve sheath myxoma (J Goldstein).
  12. Plexiform fibrohistiocytic tumor (AM Gown).
  13. Hyalinizing spindle cell tumor with giant rosettes (HSTGR) (M Michal).
  14. Testicular tumor of the adrenogenital syndrome (M Michal).
  15. Inguinal lymph node metastasis from aggressive papillary adenocarcinoma of sweat gland origin (M Miettinen).
  16. (Possible) colonic localization of Behcet's disease (PP de Saint Maur).
  17. Ligneous cervicitis (SJ Schnitt).
  18. Enteropathy-associated T-cell lymphoma (J Sickel).
  19. Pleomorphic hyalinizing angiectatic tumor of soft parts (DV Spagnolo).
  20. Liver metastasis from acinar cell carcinoma of pancreatic origin (LM Weiss).
- Quiz case (1). Blood test positive for a case of homozygous sickle cell anemia (M Bisceglia). 28
  - Quiz case (2). "Epimyoeplithelial carcinoma plus a stromal sarcoma" of the breast (N Weidner). 28

## SEMINAR N. 29

1. Solitary superficial angiomyxoma with epithelial components, subcutis, and scalp (PW Allen).
  2. Retrograde lymphatic spread to the breast of metastatic ovarian carcinoma from axillary lymph node metastasis (IJ Bleiweiss).
  3. Cardiac fibroma (K Cooper).
  4. Erdheim-Chester disease involving the lung (TV Colby)\*.
  5. Parachordoma (I Damjanov).
  6. Renal extranodal Rosai-Dorfman's disease (AP Dei Tos).
  7. Biliary adenofibroma (H Dominguez-Malagon).
  8. Metastatic malignant mesothelioma to the maxillary bone (V Eusebi).
  9. Acral myxoinflammatory fibroblastic sarcoma or inflammatory myxohyaline tumor of distal extremities with virocyte or Reed-Sternberg-like cells, or inflammatory myxoid tumor of soft tissue with giant bizarre cells (C Fisher).
  10. ?Phyllodes tumor of the prostate ?Low grade soft tissue neoplasm ?Adenosarcoma of prostate (CDM Fletcher).
  11. ?Spindle cell epithelioma of the vagina. ?Blastematos heterotopic Wilm's tumor (T Krausz).
  12. Paraganglioma of the thyroid (J Lamovec).
  13. Hemangiopericytoma? Solitary fibrous tumor? multicentric? (CA Moran).
  14. Lymphohistiocytoid malignant mesothelioma (JA Strauchen).
  15. Malignant epithelioid neoplasm?? of the serosal surface of bowel (S Suster).
  16. Tophaceous pseudogout of calcium pyrophosphate dehydrate deposition disease or CPP crystal deposition disease (BM Wenig).
- Quiz case (1). Congenital dyserythropoietic anemia, type II (M Bisceglia).
  - Quiz case (2). Disseminated toxoplasmosis (in transplanted lung) (TV Colby).
  - Quiz case (3). Malignant Sertoli cell tumor with focal spindle cell (sarcomatoid) features (S Suster).

### **SEMINAR N. 30**

1. Benign granular cell tumor of the bronchus (GJ Berry).
  2. Necrotizing fasciitis due to group-A streptococcus (JKC Chan).
  3. Epithelioid hemangioendothelioma of the liver (TV Colby).
  4. Osteosarcoma of the bladder (O Dietze).
  5. Giant cell tumor vs aneurismal bone cyst of the larynx (G Falconieri).
  6. HELLP syndrome with pseudoangiosarcomatous features (J Forteza-Villa).
  7. Malignant neuroendocrine tumor in fibropolycystic disease of liver (J Goldstein).
  8. Synovial metaplasia in lipoma (M Michal).
  9. Adenoid-cystic carcinoma of the ovary (M Michal).
  10. Polypoid cystitis due to schistosoma hematobium (S Ramon y Cajal).
  11. Colitis cystica profunda diffusa resulting of protracted ulcerative colitis (PP de Saint-Maur).
  12. Adenoid cystic carcinoma of the breast, grade I (JZ Sickel).
  13. Inflammatory myofibroblastic tumor of the spleen with necrotizing, suppurative granulomatous inflammation (DV Spagnolo).
  14. Atypical lymphoid infiltrate, consistent with an abnormal immune response (LM Weiss).
- Quiz case (1). Well differentiated neuroendocrine carcinoma of the lung (N Weidner).

## **SEMINAR N. 31**

1. Desmoplastic fibroblastoma (PW Allen)\*.
  2. Low grade endometrial stromal sarcoma of the vagina (CE Bacchi).
  3. Low grade (miofibro-)sarcoma plus tubular carcinoma (collision tumor) versus sarcomatoid carcinoma of the breast (I Bleiweiss).
  4. Pleuropulmonary blastoma, type I (JKC Chan).
  5. Herpes virus proctitis in ulcerative colitis (K Cooper).
  6. Anaplastic T-cell lymphoma (I Damjanov).
  7. Dedifferentiated liposarcoma with neural-like whorling pattern (AP Dei Tos).
  8. Primary yolk sac tumor of the appendix versus poorly differentiated adenocarcinoma with yolk sac features (H Dominguez-Malagon).
  9. Matrix producing carcinoma (malignant mixed tumor) or epimyoeplithelial carcinoma (V Eusebi).
  10. Diabetic mastopathy (sclerosing lymphocytic lobulitis) (C Fisher)\*.
  11. Primary abdominal monophasic synovial sarcoma (CDM Fletcher).
  12. (AL) Amyloid lymphadenopathy (J Lamovec).
  13. Angiotropic B-cell lymphoma (JA Strauchen).
  14. ?Myoeplithelioma of soft tissues (S Suster).
  15. Sialoblastoma (BM Wenig).
- Quiz case (1). Hyperplastic transplanted parathyroid in the forearm (M Bisceglia).
  - Quiz case (2). Pneumatosis cystoides intestinalis (M Bisceglia).

## **SEMINAR 32**

1. Adrenal oncocytoma (D Ben-Dor).
  2. Epithelioid psammomatous melanotic schwannoma (GJ Berry).
  3. Cotyledonoid dissecting leiomyoma of the uterus (JKC Chan).
  4. Mucocele with myxoglobulosis of the appendix (JKC Chan).
  5. Inflammatory fibrosarcoma of the lung (TV Colby).
  6. Low grade epithelioid MPNST versus high grade extraskeletal myxoid chondrosarcoma (O Dietze).
  7. Non-germ cell tumor arising in a germ cell tumor (G Falconieri).
  8. Ovarian, cystic monodermal teratoma (J Goldstein).
  9. Mucoepidermoid carcinoma of the thymus (T Krausz).
  10. FATWO (Wolffian adnexal tumor) (M Michal).
  11. Peripheral nerve sheath tumor with neuromelanin (M Michal).
  12. Glioneuronal tumor with rosette (S Ramon y Cajal).
  13. Benign schwannoma of digestive tract (PP de Saint-Maur).
  14. Agranular CD4+CD56+CD2- cutaneous lymphoma (DV Spagnolo).
  15. ?Monophasic synovial sarcoma with metaplastic cartilage (S Suster).
  16. ?Low grade fibrohistiocytic tumor (S Suster).
  17. Low grade breast tumor c/w adenoid cystic carcinoma (N Weidner).
- Quiz case (1). Atypical lipomatous tumor with spindle cell features vs variant of myxofibrosarcoma, vs other possibilities (O Dietze).

### **SEMINAR 33**

1. Infiltrating (and recurring) glomus tumor of the deep soft tissues misdiagnosed as synovial sarcoma (PW Allen).
2. Microglandular adenosis (IJ Bleiweiss).
3. Sclerosing extramedullary hematopoietic tumor in chronic myeloid leukaemia (JKC Chan).
4. Ischemic colitis secondary to CMV vasculopathy (K Cooper).
5. Primitive neuroectodermal tumor of the ovary, arising in a teratoma (I Damjanov).
6. Infiltrating squamous cell carcinoma of the liver arising in hepatic cyst of the foregut type (AP Dei Tos).
7. Xanthomatous/angiomatous meningioma (with microcystic and secretory features) (H Dominguez-Malagon).
8. Malignant adenomatoid tumor of the testis vs adenomatoid tumor (V Eusebi).
9. Synovial sarcoma with prominent glandular component (C Fisher).
10. Massive localized lymphoedema in morbid obesity (CDM Fletcher).
11. Clear cell myomelanocytic tumor of the falciform ligament (A Folpe).
12. Merkel cell carcinoma (J Forteza-Vila).
13. Epithelioid sarcoma of proximal type (J Lamovec).
14. Aldosteronoma (CA Moran).
15. Well-differentiated endometrioid carcinoma resembling FATWO (JZ Sickel).
16. Mastocytosis (JA Strauchen).
17. ?Myxoid and spindle cell sarcoma, low grade, consistent with extraskeletal myxoid chondrosarcoma (S Suster).
18. Fibrous pseudotumor of the digits (LM Weiss).
19. Undifferentiated malignant neoplasm of unknown origin (BM Wenig).

### SEMINAR 34

1. Mixed epithelial-stromal tumor of the kidney (CE Bacchi)\*.
  2. Benign adenomyoepithelioma of the breast (D Ben Dor).
  3. Microcrystalline pulmonary intravascular material secondary to intravenous injection of oral Vicodin tablets (G Berry).
  4. 4A: lipofibromatous hamartoma of the median nerve; 4B: lipofibromatous hamartoma of the medial plantar nerve with macrodactyly (M Bisceglia).
  5. Dedifferentiated adenoid cystic carcinoma of the submandibular gland (JKC Chan).
  6. Abdominal localized malignant mesothelioma of the cecum (TV Colby).
  7. Neurofibroma with epithelioid features and granular cell differentiation (O Dietze).
  8. Papillary (chromophil) renal cell carcinoma (G Falconieri).
  9. Epithelioid variant of pleomorphic liposarcoma, arising as a component of a dedifferentiated liposarcoma (AL Folpe).
  10. Extrapneumonic solid-cystic tumor (M Fukunaga).
  11. Giant cell fibroblastoma of childhood or proliferative fasciitis and myositis of childhood versus pleomorphic myogenic sarcoma (J Goldstein).
  12. Metastatic adrenal cortical carcinoma (AM Gown).
  13. ?Variant of myxoid chondrosarcoma of soft tissue (T Krausz).
  14. Unclassified hemangioendothelioma variant, probably originating from the inferior vena cava of uncertain biologic potential (M Miettinen).
  15. Extragastrointestinal stromal tumor of urinary bladder serosa (M Miettinen).
  16. Placental site trophoblastic tumor (M Michal).
  17. Benign renal angiomyoadenomatous tumor (M Michal).
  18. Lumbar nuchal-type fibroma in an adolescent boy with probable Gardner's syndrome (PP de Saint-Maur).
  19. T-cell granular lymphocytic leukemia involving lymph node (DV Spagnolo).
  20. Low grade vs benign spindle cell "true" histiocytic proliferation?? "Fibrous histiocytoma" of soft tissue?? Missed-the-boat-oma?? (S Suster)
- Quiz case (1). Membranous fat necrosis (S Suster).
  - Quiz case.(2). Hemangiopericytoma-like tumor of the nose (N Weidner).
  - Additional case to Seminar #19 -Case 17 (BM Wenig). Heffner tumor (M Bisceglia)\*.

### **SEMINAR 35**

1. Hemosiderotic fibrohistiocytic lipomatous lesion of the foot – ankle (PW Allen).
2. Metastatic medullary carcinoma of the thyroid simulating melanoma (IJ Bleiweiss).
3. Rhinoscleroma (K Cooper).
4. Malignant melanoma of the vagina with ganglioneuroblastic differentiation (I Damjanov).
5. Pulmonary epithelioid angiosarcoma (AP Dei Tos).
6. Necrotizing sialometaplasia associated (secondary) to midline angiocentric (T-NK) lymphoma (H Dominguez-Malagon).
7. Extrapneumonic solid-cystic tumor (H Dominguez-Malagon).
8. Metastasizing granular cell tumor (V Eusebi).
9. Hemosiderotic fibrohistiocytic lipomatous tumor (C Fisher).
10. Sclerosing paraganglioma of the parapharyngeal space (CDM Fletcher).
11. Peripheral T-cell lymphoma unspecified (predominantly large cell) (J Forteza-Vila).
12. Angiomatoid malignant fibrous histiocytoma (JR Goldblum).
13. Malignant phyllodes tumor associated with infiltrating lobular carcinoma of the breast (collision tumor) (J Lamovec).
14. Chronic rejection in lung transplant with herpes virus type inclusions (S Ramon y Cajal).
15. Giant cell interstitial pneumonia (J Sickel).
16. Plexiform fibrohistiocytic tumor with regional lymph node metastases (JA Strauchen).
17. Hyalinizing mesenchymal neoplasms of undetermined malignant potential (S Suster).
18. Rosai-Dorfman's disease of skin (extranodal: skin) (LM Weiss).
19. Pneumocystis carinii infection of the small intestine with CMV infection (B Wenig).
20. Low-grade spindle cell sarcoma, NOS (S Suster).
  - Quiz Case (1). Chester-Erdheim disease of the lung (S Suster).
  - Quiz case (2). Duplicatio intestinalis (JZ Sickel).
  - Follow up case to Seminar # 28 –case 3 (M Bisceglia). Chester-Erdheim disease evolution in Langerhan's cell histiocytosis (M Bisceglia).
  - Additional case to Seminar # 33 –case 15 (JZ Sickel). Endometrioid primary carcinoma of the uterine salpynx (M Bisceglia)\*.

### **SEMINAR # 36**

1. Malignant tumor, NOS (CE Bacchi).
2. Carcinoma ex pleomorphic adenoma (encapsulated, non-invasive, carcinoma in situ) of the parotid gland (D Ben Dor).
3. Extranodal dendritic reticulum cell sarcoma (GJ Berry).
4. Lymphangioma-like adenomatoid tumor of the adrenal gland (M Bisceglia).
5. McArdle disease or myophosphorylase deficiency (M Bisceglia).
6. Lymph node –involvement by angiomyolipoma (JKC Chan).
7. Aggressive systemic mastocytosis, myelodysplastic syndrome (chronic myelomonocytic leukaemia) (O Dietze).
8. Syncytiotrophoblastic cell-rich seminoma (G Falconieri).
9. Phosphaturic mesenchymal tumor, mixed connective tissue variant causing oncogenic osteomalacia (AL Folpe).
10. Lymphoepithelioma-like carcinoma of the renal pelvis (M Fukunaga).
11. Histiocytosis with signet ring change; negative for carcinoma (A Gown).
12. Dedifferentiated liposarcoma of the vulva (T Krausz).
13. Well-differentiated cutaneous angiosarcoma mimicking clinical rosacea (T Mentzel).
14. Dendritic reticulum cell sarcoma, probably of nodal origin (M Miettinen).
15. Fulminating pneumonia by *Corynebacterium jeikeium* (PP De Saint Maur).
16. Tumefactive soft tissue extension from longstanding Paget's disease simulating sarcoma (Paget's pseudosarcoma) (DV Spagnolo).

## **SEMINAR # 37**

1. Undiagnosed soft tissue tumor, presumably benign, with features of desmoplastic fibroblastoma, solitary fibrous tumor, and pleomorphic hyalinizing angiectatic tumor (PW Allen).
2. Phlegmonous enterocolitis due to *E. coli* (TV Colby).
3. Pseudoactinomycotic radiate granules in endocervical curettage (K Cooper).
4. Carcinosarcoma of the urinary bladder metastatic to the clitoris (I Damjanov).
5. Spindle cell hemangioma. (H Dominguez-Malagon).
6. Benign schwannoma with cellular (neuroblast-like component) (V Eusebi).
7. Myxoid biphasic synovial sarcoma with SYT-SSX2 fusion transcripts (C Fisher).
8. Aneurysmal bone cyst of soft tissue (CD M Fletcher).
9. Cutaneous and visceral Kaposi's sarcoma with cardiac tamponade (J Forteza Vila).
10. Atypical, solitary fibrous tumor (J Goldstein).
11. Retroperitoneal hemangioblastoma extending from spinal canal. (J Lamovec).
12. Sex-cord tumor with annular tubules unassociated with Peutz-Jeghers' syndrome (M Michal).
13. Spindle and cuboidal renal cell carcinoma (loopoma) (M Michal).
14. Interdigitating reticulum cell sarcoma.???? (C Moran).
15. Epithelioid angiosarcoma. (S Ramon y Cajal).
16. Parvovirus B19 infection. (JZ Sickel).
17. Endometrial marginal-zone B cell lymphoma, extranodal (MALT-type) (J Strauchen).
18. Spindle cell sarcoma, NOS (S Suster).
19. Mantle cell lymphoma, involving the intestine (LM Weiss).
20. Necrotizing granulomatous inflammation of soft tissue of unknown etiology (BM Wenig).
  - o Follow-up case to AMR Seminar #32, case1 (D Ben-Dor). Adrenal oncocytoma, malignant (D Ben Dor).

## **SEMINAR # 38**

1. Granulomatous slack skin (CE Bacchi).
2. Follicular adenoma of the thyroid with papillary architecture (D Ben Dor).
3. Pompe's disease involving the heart (alpha- 1,4-Glucosidase deficiency) (GJ Berry).
4. Lymphadenoma of the parotid gland without sebaceous metaplasia (M Bisceglia).
5. Brucella orchitis (M Bisceglia).
6. Myxoid liposarcoma, metastatic to breast (IJ Bleiweiss).
7. Lung –symplastic, sclerosing hemangioma, with incipient sclerosing hemangiomas in the surrounding lung (JK Chan).
8. Radiation-induced pseudocarcinomatous proliferations of the urinary bladder (JK Chan).
9. Partially poorly differentiated renal cell carcinoma with small cell anaplastic (neuroendocrine) tumor (O Dietze).
10. Meningioma of the middle ear (G Falconieri).
11. Myoepithelioma of soft tissue, probably of low grade malignancy (AL Folpe).
12. Diaphragmatic stromal endometriosis with catamenial pneumothorax (M Fukunaga).
13. Epithelioid sarcoma, “proximal” type (AM Gown).
14. Metastatic acinar cell carcinoma, microglandular/microcystic variety) of the pancreas (T Krausz).
15. Cutaneous CD8+/TIA+ T-cell lymphoma (T Mentzel).
16. Retroperitoneal uterine-type leiomyoma (M Miettinen).
17. Colchicine effect in a hyperplastic polyp (E Montgomery).
18. Synovial (osteo-)chondromatosis (PP de Saint Maur).
19. Pediatric renal neoplasm characterized by epithelioid morphology, basement membrane production, focal HMB-45 immunoreactivity, and t(6;11) (p21.1;q12) (DV Spagnolo).
20. Low-grade spindle cell myofibroblastic proliferation (plus Follow-up: ...) (S Suster).

### **SEMINAR # 39**

1. Multiple gastric intramucosal cysts and fundic gland polyps in Zollinger-Ellison's syndrome. (PW Allen)
  2. Peritoneum – decidualized endometriosis with myxoid change. (JKC Chan).
  3. Acinar cell cystadenoma of the pancreas (? Acinar cystic transformation) (JKC Chan).
  4. Visceral juvenile xanthogranuloma of the lung (TV Colby).
  5. Large cell neuroendocrine carcinoma of the larynx (K Cooper).
  6. Inflammatory leiomyosarcoma of the abdomen (I. Damjanov).
  7. EWS/PNET of the meninges (AP Dei Tos).
  8. Malignant papillary mesothelioma presenting as an ovarian mass (primary ovarian malignant mesothelioma???) (H Dominguez-Malagon).
  9. Chondroblastoma of the sphenoid (V Eusebi).
  10. Clear cell sarcoma (of tendon sheath) arising in the palate (C Fisher).
  11. Splenic lymphangioma (CDM Fletcher).
  12. Langerhans' cell sarcoma (malignant histiocytosis X) (J Forteza-Vila).
  13. Lipoleiomyosarcoma (well differentiated liposarcoma with leiomyomatous differentiation). (J Goldstein).
  14. Hyperplastic callus in soft tissue at the site of the fractured surgically fixed femur associated with osteogenesis imperfecta (?type IV) (J Lamovec).
  15. Oncocytic carcinoma of the stomach (o parietal carcinoma of the stomach) (M Michal).
  16. Pseudoneoplastic hyperplasia of the islet cells with perineurial spread of the pancreas most probably due to the obstruction of the ductus choledocus (M Michal).
  17. Metastatic renal cell carcinoma involving the liver with associated peliosis hepatis (J Sickel).
  18. Infectious mononucleosis of the cervical lymph node and adenoids (JA Strauchen).
  19. ??Low grade carcinoma of unknown origin. \*\*\*F-Up in Sem. #45 : low grade endometrial stromal sarcoma (S Suster).
  20. Inflammatory myo-fibroblastic sarcoma (PE Wakeley, Jr).
  21. ALK-negative anaplastic large cell lymphoma (LM Weiss).
- Quiz-Case (1). Hypereosinophilic syndrome (TV Colby).
  - Quiz-Case (2). Ovarian ependymoma (N Weidner).
  - Quiz-Case (3). Pancreatoblastoma, in adult (N Weidner).

## **SEMINAR # 40**

1. Lymphoplasmacytic lymphoma associated with peliosis hepatis (CE Bacchi).
2. Pregnancy luteoma with florid degenerative changes vs juvenile granulosa cell tumor arising independently adjacent to (collision) or from pregnancy luteoma vs juvenile granulosa cell tumor with extensive luteinization (mimicking luteoma) (D Ben Dor).
3. Pulmonary heterotopia in a monoamniotic twin (GJ Berry).
4. Toxoplasmic lymphadenitis (M Bisceglia).
5. Solitary fibrous tumor (IJ Bleiweiss).
6. Clear cell change in colorectal adenoma (O Dietze).
7. Warthin-like papillary carcinoma of the thyroid (G Falconieri).
8. Atypical fibroproliferative disorder akin low grade myofibroblastic tumor (G Falconieri).
9. Extraspinal myxopapillary ependymoma (AL Folpe).
10. Malignant myoepithelioma of the vulva (M Fukunaga).
11. High-grade pleural-based thymic carcinoma vs metastatic thymic carcinoma to pleura (AM Gown).
12. Lipomatous hemangiopericytoma vs peculiar variant of atypical lipomatous tumor (T Krausz).
13. Spindle cell rhabdomyosarcoma in an adult (T Mentzel).
14. Malignant glomus tumor of the stomach (M Miettinen).
15. Enterocolic (lymphocytic) phlebitis (E Montgomery).
16. Hepatobiliary cystadenocarcinoma with “ovarian-like stroma” (S Ramon y Cajal).
17. Coccidioidomycosis of the testis and epididymis (JZ Sickel).
18. Aggressive NK-cell lymphoma with terminal hemophagocytic syndrome (DV Spagnolo).

## **SEMINAR # 41**

1. Spindle cell / composite hemangioendothelioma (PW Allen).
  2. Severe acute respiratory syndrome due to SARS coronavirus infection (JKC Chan).
  3. Lymphangiomyomatosis and multifocal micronodular pneumocyte hyperplasia (JKC Chan).
  4. Metastatic (benign) papilloma of the breast (TV Colby).
  5. Idiopathic retroperitoneal fibrosis (Ormond's disease) (K Cooper).
  6. GIST of the liver, metastatic to the lymph nodes, with giant cell reaction (I Damjanov).
  7. Malignant mixed Mullerian tumor with heterologous (chondrosarcomatous) differentiation of the peritoneum (AP Dei Tos).
  8. Cellular neurothekeoma (H Dominguez-Malagon).
  9. Primary intraosseous meningioma (V Eusebi).
  10. Perivascular epithelioid cell tumor (PEComa) resembling clear cell myomelanocytic tumor (C Fisher).
  11. Acantholytic /pseudovascular squamous cell carcinoma (with myxoid stroma) (CDM Fletcher).
  12. Peripheral, extranodal, large T-cell lymphoma (NOS) (J Forteza-Vila).
  13. Chronic lymphocytic leukemia and hepatocellular carcinoma (J Goldstein).
  14. Salivary duct carcinoma (J Goldstein).
  15. Lipoblastoma -intramuscular (J Lamovec).
  16. Dendritic neurofibroma with pseudorosettes (M Michal).
  17. Necrotizing enterocolitis due to clostridium septicum (JA Strauchen).
  18. S-100 negative (then positive) schwannoma (S Suster).
  19. Dermal hamartoma with follicular and (?) eccrine differentiation (S Suster).
  20. Subinvolution of the uteroplacental arteries [subinvolution of the placental site] (PE Wakely, Jr).
  21. Mucinous tubular and spindle cell carcinoma (LE Weiss).
  22. Histiocytoid variant of eccrine sweat gland carcinoma of the eyelid and orbit (BM Wenig).
- Quiz case n. 1. Myoepithelioma of the vulva (M Bisceglia).
  - Quiz case n. 2. Cutaneous adult myofibroma (S Suster).
  - Quiz case n. 3. Polymorphous hemangioendothelioma of lymph node (PE Wakely, Jr) (Follow-up in AMR #45: low grade angiosarcoma).

## **SEMINAR # 42**

1. Rhabdomyomatous carcinoma of the thymus of posterior mediastinum (CE Bacchi).
2. Merkel cell carcinoma of the scalp presenting as simultaneous metastatic lesion in the gums of the upper and lower jaws (D Ben-Dor).
3. Tracheal paraganglioma (GJ Berry).
4. Unilateral renal cystic disease of nongenetic etiology (M Bisceglia)\*.
5. Basal cell carcinoma of the nipple (IJ Bleiweiss).
6. Adenocarcinoma of the bladder with well differentiated tubulo-villous and poorly differentiated signet ring cell areas, most probably of urachal origin (O Dietze).
7. Parachordoma / myoepithelioma of the stomach (G Falconieri).
8. Crystal storing histiocytosis (AL Folpe).
9. Florid papillomatosis (adenoma) of the nipple (M Fukunaga).
10. PEC-oma of the liver (AM Gown).
11. Myolipoma (T Krausz).
12. Reticular perineurioma of soft tissues (T Mentzel).
13. Brown bowel syndrome (E Montgomery).
14. Uterine adenomatoid tumor (S Ramon y Cajal).
15. Poorly differentiated transitional cell carcinoma of the urinary bladder with clear cell features (JZ Sickel).
16. Leydig cell tumor with adipocytic differentiation and spindle cell differentiation with extensive stromal myxoid/myxohyaline change (and ??osteoid) (DV Spagnolo).
17. Undiagnosed and unclassified high-grade malignant neoplasm with polyphenotypism (DV Spagnolo).

### SEMINAR # 43

1. ?Lipofibromatosis, ?Lipoblastoma, retroperitoneum (PW Allen).
  2. Olfactory neuroblastoma with glandular differentiation –nasal cavity (JKC Chan).
  3. Churg-Strauss disease of the gut (TV Colby).
  4. Inflammatory myofibroblastic tumor of the kidney (K Cooper).
  5. Necrobiotic xanthogranuloma –skin-subcutis (I Damjanov).
  6. Adenocarcinoma of the pigmented retinal epithelium (H Dominguez-Malagon).
  7. Invasive (?ductal) carcinoma of the pancreas, basaloid type (V Eusebi).
  8. Kaposi's sarcoma with unusual features of the iliac lymph node (C Fisher).
  9. Duodenal gangliocytic paraganglioma (CDM Fletcher).
  10. Angioinvasive scedosporium apiospermum (aspergillus-like) of the heart (J Forteza Vila).
  11. Renal cell carcinoma, chromophobe cell type, pigmented, associated (in collision) with angiomyolipoma (J Lamovec).
  12. Sinonasal tubulopapillary low-grade adenocarcinoma (M Michal).
  13. Inflammatory malignant fibrous histiocytoma of the pelvis (M Miettinen).
  14. Rhinocerebral mucormycosis (JA Strauchen).
  15. Pleomorphic high-grade sarcoma of the groin (S Suster).
  16. Mesenchymal chondrosarcoma of the L5 vertebral body (PE Wakeley, Jr).
  17. ? Glycogen-rich (clear cell ) carcinoma of the breast (PE Wakeley) (Follow-up in AMR Seminar #45: no ICC evidence for myoepithelial, neuroendocrine or basaloid differentiation) (PE Wakeley).
  18. Interdigitating dendritic cell tumor vs ?sustentaculoma of the adrenal (LM Weiss).
- Quiz case (1). Metastatic mixed tumor of salivary gland (parotid) to the lung (TV Colby).
  - Quiz case (2). Nodular “metastatic” calcification of the lung secondary to hyperparathyroidism (S Suster).

## **SEMINAR # 44**

1. Sarcomatoid urothelial carcinoma of the bladder with pseudoangiosarcomatous features (D Ben Dor).
2. Desmin cardiomyopathy (GJ Berry).
3. Bone metastases from cutaneous basal cell carcinoma (M Bisceglia).
4. Osteogenic sarcoma, probably radiation-induced (IJ Bleiweiss).
5. Metastatic Merkel cell carcinoma with sarcomatoid component and glandular differentiation) (TV Colby).
6. Rhabdoid meningioma –gr. 3 (O Dietze).
7. Small spindle and epithelioid cell sarcoma, NOS (G Falconieri).
8. “Early” pleomorphic hyalinizing angiectatic tumor of soft parts (AL Folpe).
9. Ochronotic arthropathy (M Fukunaga).
10. ?Alveolar soft part sarcoma (AM Gown)
11. Kaposi’s sarcoma of the scrotum vs angiosarcoma in a HIV+ patient (T Krausz).
12. Spindle cell carcinoma of the parotid gland consistent with a SETTLE-type tumor (spindle cell carcinoma of possible branchial cleft origin) (T Mentzel).
13. Lipofibromatosis (finger) (E Montgomery).
14. Anaplastic embryonal rhabdomyosarcoma, apparently primary in CNS (E Montgomery).
15. Kimura’s disease (S Ramon y Cajal).
16. Extramedullary hematopoiesis involving the urinary bladder (JZ Sickel).
17. Malignant mesothelioma (epithelioid) presenting as an abdominal wall soft tissue mass (D Spagnolo).
18. Neuroendocrine carcinoma –for lack of an alternative diagnosis (BM Wenig).
  - Quiz Cases (1). India ink endoscopic tattooing (M Bisceglia).
  - Quiz Cases (2). Amebic pneumonia (TV Colby).
  - Quiz Cases (3). Bothryoid or phyllodes prostatic adenocarcinoma (G Falconieri).
  - Quiz Cases (4). Epithelioid variant of malignant peripheral nerve sheath tumor (vs melanoma with spindle cells, myxoid and balloon cell areas) (S Suster).

## **SEMINAR # 45**

1. Retroperitoneal primary borderline mucinous tumor (PW Allen).
  2. Metastasizing cellular dermatofibroma of the skin (CE Bacchi)\*.
  3. Myxoid schwannoma (K Cooper).
  4. Malignant Sertoli cell tumor metastatic to the abdominal lymph nodes (I Damjanov).
  5. Low grade endometrial stromal sarcoma with sex cord differentiation (A Dei Tos).
  6. ?Chordoid meningioma (H Dominguez-Malagon).
  7. ? Metastatic osteosarcoma (V Eusebi).
  8. Giant cell tumor involving sigmoid colon, following excision of borderline mucinous ovarian tumor with sarcoma-like mural nodules (C Fisher).
  9. Extraskkeletal Ewing's sarcoma /PNET (CDM Fletcher).
  10. Micronodular thymoma with lymphoid stroma (J Forteza Vila).
  11. Aneurysmal type of solitary fibrous tumor / pericytoma-like fibroblastoma (J Lamovec).
  12. Low grade trichoblastic carcinosarcoma of the skin (M Michal).
  13. Abdominal angiostrongylosis due to angiostrongylus Costaricensis (JA Strauchen).
  14. Mediastinal extrarenal rhabdoid tumor (undifferentiated sarcoma with rhabdoid features) (PE Wakely, Jr).
  15. Inflammatory pseudotumor of the adrenal (LM Weiss).
- Quiz case (1). Primary synovial sarcoma of the kidney (H Dominguez Malagon).
  - Quiz case (2). Hamazaki-Wesenberg bodies with granulomas (PE Wakely, Jr).

## SEMINAR # 46

1. Parotid clear cell oncocytosis, presumably diffuse bilateral (D Ben Dor).
  2. Histiocytoid cardiomyopathy (GJ Berry).
  3. Massive lymph node metastasis of aneurysmal fibrous histiocytoma (primary in the skin: see above). So-called (benign) metastasizing cutaneous fibrous histiocytoma (M Bisceglia)\*.
  4. Invasive adenosquamous carcinoma (low grade metaplastic carcinoma) (I Bleiweiss).
  5. Cocaine-induced osteocartilaginous necrosis and mucosal ulceration/inflammation (JKC Chan).
  6. Pulmonary metastatic (benign) meningioma (TV Colby).
  7. Recurrent melanoma associated with (focal) osteoclast-like multinucleated giant cell reaction (G Falconieri).
  8. Intranodal palisaded myofibroblastoma (AL Folpe).
  9. Osteogenic melanoma of the foot (M Fukunaga).
  10. Spindle cell melanoma vs. epithelioid malignant peripheral nerve sheath tumor (AM Gown).
  11. Retroperitoneal angiomyolipoma (T Krausz).
  12. Intravascular myopericytoma of soft tissue (T Mentzel).
  13. Juxtaglomerular cell tumor of the kidney (E. Montgomery).
  14. Consistent with malignant solitary fibrous tumor of the pleura (S Ramon y Cajal).
  15. Small cell neuroendocrine carcinoma of uterine cervix (JZ Sickel).
  16. Rosai-Dorfman's disease involving the patella (DV Spagnolo).
  17. Undifferentiated malignant tumor in the parotid with extensive angioinvasion (AFIP's suggested opinions: A) Intermediate to high grade sarcoma consistent with MFH; B) Unusual intermediate to high-grade pleomorphic sarcomatous neoplasm of uncertain origin vs sarcomatoid carcinoma with sebaceous cell differentiation) (BM Wenig).
- Quiz Case 1: . neurotropic malignant melanoma with rhabdoid features (vs epithelioid MPNST or malignant granular cell tumor) S. Suster .

## SEMINAR # 47

1. Retiform hemangioendothelioma (Dabska), skin of left heel (PW Allen).
  2. Malignant Leydig cell tumor of the testis in a 1 year-old boy with isosexual pseudoprecocity (CE Bacchi).
  3. Angiomatoid fibrous histiocytoma (AKA angiomatoid "MFH") of the adrenal (K Cooper).
  4. Atrial myxoma with glandular inclusions (I Damjanov).
  5. Low grade malignant Mullerian mixed tumor of the endometrium (O Dietze).
  6. Invasive "breast tumor resembling the tall cell variant of papillary carcinoma of thyroid" (V Eusebi).
  7. Synovial sarcoma with squamous differentiation (C Fisher).
  8. Nasal chondromesenchymal hamartoma (??) (CDM Fletcher).
  9. Brain venous infarction vs a postinfectious hemorrhagic leukoencephalopathy (J Forteza-Vila).
  10. Intraductal and invasive oncocytic papillary-mucinous carcinoma of the pancreas (J Lamovec).
  11. Prolapse of the fallopian tube after hysterectomy associated with exuberant angiofibroblastic stromal response (M Michal).
  12. Round cell liposarcoma with cord-like growth pattern (M Miettinen).
  13. True leiomyosarcoma of jejunum, high grade (M Miettinen).
  14. Dedifferentiated endometrioid adenocarcinoma (EG Silva).
  15. Hepatic "MALT" lymphoma (extranodal marginal-zone B cell lymphoma of mucosa-associated lymphoid tissue type) associated with primary sclerosing cholangitis (JA Strauchen).
  16. Renal oncocytosis (PE Wakely, Jr).
- Quiz case 1: Infiltrating ductal carcinoma of the breast with neuroendocrine features with charcoal pigment injected for intraoperative localization (J Lamovec).

## SEMINAR # 48

1. Uterine leiomyoma with non-lymphomatous massive T-cell infiltrates secondary to treatment with GnRH agonist (D Ben Dor).
2. Hamazaki-Wesenberg bodies (“yellow-brown bodies”) in granulomatous lymphadenitis (GJ Berry).
3. Familial complete androgen insensitivity syndrome (Morris syndrome or testicular feminization syndrome) in two siblings (M Bisceglia).
4. Lymph node – Kawasaki disease (JKC Chan).
5. Unique pulmonary cystic, probably hamartomatous, lesions in the lung in a patient with von Hippel Lindau disease (TV Colby).
6. Pulmonary adenofibroma (fibroadenoma of the lung, fibroleiomyomatous hamartoma, adenoleiomyomatous hamartoma) (H Dominguez-Malagon).
7. Nasopharyngeal papillary adenocarcinoma (G Elmberger).
8. Inflammatory myofibroblastic tumor of the lung (G Falconieri).
9. Metastatic primitive neuroectodermal tumor (resembling medulloepithelioma), arising in the setting of prior testicular germ cell tumor (AL Folpe).
10. Hepatoid carcinoma with serous component of the Fallopian tube (M Fukunaga).
11. Ligneous vaginitis in association with adenosis (T Krausz).
12. Progressive nodular histiocytoma (T Mentzel).
13. Inflammatory fibroid polyp of the small bowel (E Montgomery).
14. Epithelioid hemangioendothelioma with prominent intravascular dissemination (S Ramon y Cajal).
15. Seminoma with associated hyperplasia and cystic dilatation of rete testis (JZ Sickel).
16. Reactive microglandular/microtubular proliferation in a benign nasal polyp (aka microglandular adenosis) versus low grade tubular carcinoma (DV Spagnolo).
17. Sino-nasal glomangiomyopericytoma/HPC-like tumor versus atypical intranasal meningioma (BM Wenig).

## **SEMINAR # 49**

1. Female adnexal tumor of probable Wolffian origin (FATWO), mesentery and retroperitoneum (PW Allen).
  2. Intestinal perineurioma with infiltrative features (C Bacchi).
  3. Hydatid cyst (echinococcosis) of bone (O Ben-Itzhak).
  4. Cellular type of congenital mesoblastic nephroma (I Bleiweiss).
  5. Phosphaturic mesenchymal tumor (K Cooper).
  6. Ameloblastic carcinoma (O Dietze).
  7. Intracranial Rosai-Dorfman disease (V Eusebi).
  8. Neurofibromatous involvement of ileum with 'diffuse ganglioneuromatosis' in a patient with NF-1 and retroperitoneal malignant peripheral nerve sheath tumor (C Fisher).
  9. Oncocytic glomus tumour (CDM Fletcher).
  10. Sarcomatoid carcinoma of the adrenal gland (J Forteza-Vila).
  11. Epithelioid schwannoma (A Gown).
  12. Acral myxoinflammatory fibroblastic sarcoma (inflammatory myxohyaline tumor) (I Damjanov).
  13. Unclassified malignant epithelioid and spindle cell tumor with clear cell features and bizarre giant cells and prominent inflammatory and foam cell component (J Lamovec).
  14. Gastric schwannoma (M Miettinen).
  15. Round-cell variant of low-grade perineurial sarcoma? (M Michal).
  16. Endometrioid carcinoma of the ovary (clear cell variant) (E Silva).
  17. "Adenoid" glioblastoma (malignant astrocytoma, WHO grade 4, with divergent epithelial-mesenchymal differentiation) (JA Strauchen).
  18. Lipoblastic nerve sheath tumor with signet-ring lipoblastic cells (S Suster).
  19. Adult Wilms' tumor, monophasic epithelial type, metastatic (PE Wakely jr).
  20. Mycobacterial spindle cell pseudotumor (PE Wakely jr).
  21. Ganglioneuroma, with focal neurofibroma and atypical areas (L Weiss).
- Quiz case 1. .... (M Wick).

## **SEMINAR # 50**

1. High grade undifferentiated adnexal carcinoma of the skin (D Ben Dor).
2. Postradiation osteosarcoma of the pleura in a patient with previous diagnosis of Hodgkin's disease and probable atypical myofibroblastic cell proliferation with ossification (O Ben-Itzhak).
3. Sarcomatoid variant of anaplastic carcinoma of the thyroid (G Berry).
4. Medullary sponge kidney with small kidney (M Bisceglia).
5. Malignant mesothelioma (of the pleura) with invasion of the lung, presenting with pneumothorax, in a patient with (concurrent) mesothelioma in the peritoneum (TV Colby).
6. Clear cell carcinoma of the kidney with sarcomatous areas of divergent differentiation (chondrosarcoma, rhabdomyosarcoma) (H Dominguez-Malagon).
7. Multifocal gangliocytic paraganglioma with extensive ganglioneuromatous differentiation with lymph node involvement (AL Folpe).
8. Malignant basomelanocytic tumor of the skin (G Elmberger).
9. Russel body gastritis (G Falconieri).
10. Focal nodular hyperplasia of the liver with sarcoid-like granulomas (G Falconieri).
11. Perivascular epithelioid cell tumor (PEComa) of the uterus (M. Fukunaga).
12. Congenital neurocristic cutaneous hamartoma of the scalp (T Krausz).
13. Polimorphous sweat gland carcinoma of the skin (T Mentzel).
14. Mucosal tear / "fractured colon" in collagenous colitis with perforation (E Montgomery).
15. Mixed epithelial and stromal tumor of the kidney (CA Moran).
16. High grade malignant pleomorphic tumor of the pleura (S Ramon y Cajal).
17. Metastatic pancreatic adenocarcinoma simulating a primary mucinous tumor of the ovary (J Sickel).
18. Indeterminate cell tumor / sarcoma; indeterminate cell histiocytosis; dendritic cell sarcoma, not otherwise specified (D. Spagnolo).

## **SEMINAR # 51**

1. Apocrine gland cyst with hemosiderotic dermatofibroma-like stroma of the skin and subcutis of the calf (PW Allen).
2. Glomangioma of the posterior mediastinum (C Bacchi).
3. Glomus tumor of the stomach (I Bleiweiss).
4. Malignant ectomesenchymoma arising in a uterine MMMT (K Cooper).
5. Low-grade sarcoma of the bladder, multinodular (I Damjanov).
6. A. Chronic histiocytic intervillitis (O Dietze)  
B. Gamna-Gandy bodies in splenomegaly, probably secondary to an underlying liver disease (O Dietze). 51/6B)
7. In situ squamous cell carcinoma of the breast with myoepithelial cell differentiation (V Eusebi).
8. Inflammatory leiomyosarcoma in HIV positive male (C Fisher).
9. Reactive fibrovascular proliferation, possibly engrafted on a vascular malformation (CDM Fletcher).
10. Gliomatosis cerebri (J Forteza-Vila).
11. Perivascular epithelioid cell tumor (PEComa), malignant, probably metastatic (to bone) of unknown primary site (J Lamovec)
12. Cribriform adenocarcinoma of the tongue (M Michal).
13. Amyloid tumor of soft tissue with metaplastic bone (M Miettinen).
14. Poorly differentiated synovial sarcoma of the vagina (G Pelosi)
15. Well-differentiated Sertoli-Leydig cell tumor (E Silva).
16. Subcutaneous panniculitis-like T-cell lymphoma involving the breast (JA Strauchen).
17. Rhabdomyomatous giant fibrovascular polyp of the esophagus (PE Wakely jr).
18. Histiocytic sarcoma (L Weiss).

## SEMINAR # 52

1. Gastrointestinal-type clear cell sarcoma. (V Adsay)
  2. Langerhans cell histiocytosis of lymph node. (D Ben-Dor)
  3. Thyroid follicular carcinoma-like tumor of the kidney (or thyroid-like follicular variant of papillary carcinoma?). (O Ben-Itzhak)
  4. Acute mononucleosis, tonsil. (G. Berry)
  5. “Spontaneous” multiple adenomas” (spontaneous adenomatosis) of liver. (M. Bisceglia)
  6. Iatrogenic Pulmonary Emboli. (TV Colby)
  7. Thyroid sclerosing mucoepidermoid carcinoma with eosinophilia. Hashimoto thyroiditis. Oncocytic adenoma/adenomatoid oncocytic nodule. (G Elmberger)
  8. Cellular fibroepithelial tumor with malignant stroma of breast (? Adenosarcoma; ? atypical phylloides tumor) (G. Falconieri)
  9. Papillary squamotransitional cell carcinoma of the uterine cervix. (M Fukunaga)
  10. Epithelioid malignant mesothelioma, low nuclear grade, with prominent papillary pattern of peritoneum (T Krausz)
  11. Lupus panniculitis (Lupus erythematosus profundus). (T Mentzel)
  12. Giant cell angiofibroma (Giant cell rich solitary fibrous tumor). (E Montgomery)
  13. Combined small-cell carcinoma with skeletal muscle differentiation and spindle cell sarcoma component of myofibroblastic, lung (G Pelosi). 5
  14. Metastasis of sarcoma to brain (see comments). (S Ramon y Cajal)
  15. Necrotizing eosinophilic myocarditis with associated vasculitis, consistent with Churg-Strauss syndrome. Joshua Sichel
  16. Don't know – HELP! (S Suster)
- Quiz case fibrosarcomatous transformation of DFSP with metaplastic bone (or focal “osseous differentiation”) or extraskelatal osteosarcoma (S Suster)

### **SEMINAR # 53**

1. Benign lymphoepithelial cyst, head of pancreas (PW Allen).
2. Mastocytosis in lymph node (CE Bacchi).
3. Alveolar soft part sarcoma (I Bleiweiss).
4. Parotid gland – Metastatic Merkel cell carcinoma, with rhabdomyosarcoma differentiation (metastatic “Merkel cell carcinosarcoma”). (JKC Chan).
5. Metastatic low grade endometrial stromal sarcoma to the retroperitoneum (K Cooper).
6. Hodgkin's lymphoma – mediastinum (I Damjanov).
7. Clear cell atypical fibroxanthoma of skin (O Dietze).
8. Solitary fibrous tumor of the prostate (H Dominguez-Malagon).
9. Follicular dendritic cell tumor primary in breast (V Eusebi).
10. Presacral (retrorectal) dermoid cyst with Paget’s disease in a patient with possible Currarino syndrome (C Fisher)
11. Deciduoid malignant mesothelioma (CDM Fletcher)
12. Intravascular large B-cell lymphoma involving an inflammatory fibroid polyp (A Folpe)
13. Splenic marginal zone lymphoma with progression to a diffuse B cell lymphoma with overexpression of MYC (J Forteza Vila).
14. Sertoliform adenoma of the rete testis (A Gown).
15. Metastatic glioblastoma to bone (J Lamovec).
16. Oncocytic papillary renal cell carcinoma (M Michal).
17. Primitive small cell tumor with epithelial, gangliocytic, neuroendocrine and mesenchymal differentiation (M Michal).
18. Extraskkeletal osteosarcoma (M Miettinen).
19. Endometriosis of the lung vs metastatic endometrial stromal sarcoma (C Moran).
20. Angiotropic metastasis of malignant melanoma (J Strauchen).
21. Embryonal rhabdomyosarcoma of the uterine cervix (PE Wakely, Jr).
22. Mature cystic teratoma with sarcomatous component (embryonal rhabdomyosarcoma) (L Weiss).

## **SEMINAR # 54**

1. Malignant Glomus Tumor (Glomangiosarcoma) of the kidney (V Adsay).
2. Bile duct adenoma with neuroendocrine proliferation (D Ben-Dor).
3. Congenital melanocytic tumor of the face, scalp and orbit. (O Ben-Itzhak).
4. Intracardiac teratoma (left atrium) (G Berry).
5. Fatal systemic venous air embolism following endoscopic retrograde cholangiopacreatography (ERCP) (M Bisceglia).
6. Histologic changes (lung) consistent with so-called hyper IgG4 disease (TV Colby).
7. Microcystic adnexal carcinoma of the tongue (MAC) - A tumor derived from Ebner's glands (G Elmberger).
8. Sinonasal Schwannoma (G Falconieri).
9. Mesonephric adenocarcinoma of the uterine cervix with mesonephric hyperplasia (M Fukunaga).
10. Chronic pneumonitis of infancy due to *abca3* gene mutation. (T Krausz).
11. Liposarcoma of the thigh, mixed type. (T Mentzel).
12. Ectopic ependymoma of the groin (E Montgomery).
13. Neurinoma of the mediastinum with extensive regressive changes including pseudocystic spaces (ancient Schwannoma) (G Pelosi).
14. Primary ovarian fibrosarcoma (S Ramon y Cajal).
15. True epithelial "mucoepidermoid" cyst arising within an intrapancreatic accessory spleen. (J Sickel).
16. Primary ovarian carcinoma, microcystic type (E Silva).
17. Gastric schwannoma (D Spagnolo).
18. Oncocytoma likely arising from intranodal salivary gland parenchyma (B Wenig).
19. Filiform polyposis of the colon (S Suster).

## SEMINAR 55

1. Injection site high grade angiosarcoma, subcutis, left buttock region, associated with hemosiderin and large calcified masses of old fat necrosis, presumably secondary to subcutaneous iron injections 20 years previously. (PW Allen).
  2. Sclerosing extramedullary hematopoietic tumor (SEMHT) associated with chronic idiopathic myelofibrosis - intraabdominal. (CE Bacchi).
  3. Ectopic breast tissue – pubic site. (I Bleiweiss).
  4. Tubulocystic carcinoma of the kidney. (JKC Chan)
  5. Recurrent malignant GIST with diffuse rhabdoid morphology - jejunum. (K Cooper)
  6. Rosai-Dorfman disease of soft tissue – thigh. (I Damjanov)
  7. Diversion colitis. (O Diете).
  8. Infectious mononucleosis tonsillitis with geographic necrosis. (H Dominguez-Malagon).
  9. Langerhans cell sarcoma of the oral cavity (tongue). (V Eusebi).
  10. Angiosarcoma arising in AV fistula previously used for dialysis in renal transplant recipient. (C Fisher).
  11. Scrotal lymphoedema (with smooth muscle hyperplasia). (CDM Fletcher).
  12. Primary epithelioid sarcoma of bone. (A Folpe).
  13. Hepatocarcinoma with metastases to lymph nodes, pancreas, spleen, heart, intestinal mucous, scalp – Liver – with mucinous differentiation. (J Forteza Vila).
  14. Thymic carcinoma - mediastinum. (A Gown).
  15. Apocrine carcinoma of the skin with sebaceous (sebaceous-like) and mucinous differentiation - chest. (J Lamovec).
  16. Corticomedullary tumor of the adrenal glands. (M Michal).
  17. Salivary gland-type adenoma of the hypophysis. (M Michal).
  18. Dendritic reticulum cell tumor (sarcoma) arising in Castleman disease - apparently extranodal tumor – small bowel . (M Miettinen).
  19. Atypical lipomatous tumor/inflammatory well differentiated liposarcoma - retroperitoneum. (J Strauchen).
  20. Follicular neoplasm of the thyroid of undetermined malignant potential. (S Suster).
  21. Adamantinoma, squamous pattern, left tibia. (P Wakely, Jr).
  22. Extranodal Rosai-Dorfman disease, left tibia. (P Wakely, Jr).
  23. Gamma-delta lymphoma, perhaps an aggressive variant of hepatosplenic T-cell lymphoma - spleen. (L Weiss).
- Quiz case 1. Inflammatory myofibroblastic tumor of stomach (M Miettinen).
  - Quiz case 2. Pulmonary *Dirofilaria immitis* (J Sickel).
  - Quiz case 3. *Entamoeba gingivalis* mixed with *Actinomyces* in a maxillary abscess (J Sickel).
  - Quiz case 4 Post-radiation angiosarcoma arising in the chest wall and secondarily invading the thyroid. (S Suster)

## **SEMINAR 56**

1. Invasive poorly differentiated medullary-type carcinoma, arising in the ampulla. (V Adsay)
2. Non-sebaceous lymphadenoma (vs lymphoepithelial carcinoma). (D Ben-Dor)
3. Xanthomatous variant of "inflammatory pseudotumor" of the lung ("unclassified epithelioid and spindle cell neoplasm with pseudoxanthomatous features"). (O Ben-Itzhak)
4. Anaplastic large cell lymphoma in the right breast adjacent to a breast implant. (G Berry)
5. Leiomyomatosis peritonealis disseminata. (M Bisceglia)
6. Kimura's disease associated with chronic clinical manifestations (bulky cervical adenopathy), soft tissue edema and fibrosis, and cutaneous lesions. (TV Colby)
7. Nasal seromucinous hamartoma with focal REAH-like features. (G Elmberger)
8. Sinonasal ameloblastoma. (G Falconieri)
9. Angiosarcoma of the kidney. (M Fukunaga)
10. Reticular perineurioma. (T Krausz)
11. Hybrid perineurioma and (ancient) schwannoma. (T Mentzel)
12. Pyloric gland adenoma with high-grade dysplasia in a background of autoimmune metaplastic atrophic gastritis. (E Montgomery)
13. Chest wall hamartoma. (E Montgomery)
14. Deep extra-abdominal fibromatosis (desmoid tumor) of the chest with involvement of the parietal pleura and fat tissue of the mediastinum. (G Pelosi)
15. Primary mucinous cystadenocarcinoma of the breast. (S Ramon y Cajal).
16. De-differentiated chromophobe renal cell carcinoma with osteosarcomatous differentiation. (J Sickel)
17. Florid marginal zone hyperplasia of the spleen mimicking splenic marginal zone lymphoma. (D Spagnolo)

## SEMINAR 57

1. Inflammatory myxo-hyaline tumor, dermis and subcutis, left shoulder and back (P Allen)
2. Microcystic stromal tumor of the ovary (CE Bacchi)
3. Syringomatous adenoma of nipple (I Bleiweiss)
4. Epithelioid sarcoma, proximal type (K Cooper)
5. Wilms' tumor with heterologous elements and diffuse anaplasia (I Damjanov)
6. Congenital granular cell tumor (O Dietze)
7. Idiopathic hypertrophic cranial pachymeningitis (V Eusebi)
8. ?Sarcomatoid adrenal cortical carcinoma with metastatic rhabdomyosarcoma in lymph nodes (and lung) (C Fisher)
9. Hibernoma, spindle cell variant (CDM Fletcher)
10. Dedifferentiated liposarcoma (with one small focus closely resembling spindle cell lipoma) (A Folpe)
11. Idiopathic sclerosing encapsulating peritonitis (abdominal cocoon). (J Forteza Vila)
12. Pleomorphic rhabdomyosarcoma (A Gown)
13. Multiple pulmonary metastases of giant cell tumor of bone (J Lamovec)
14. Ovarian fibroma with hyaline globules (M Michal)
15. Sclerosing perineurioma (M Miettinen)
16. Low-grade serous carcinoma (EG Silva)
17. Erdheim-Chester disease with cardiac involvement (J Strauchen)
18. Adult type rhabdomyoma (P Wakely, Jr)
19. Alveolar rhabdomyosarcoma, maxilla, in an adult (P Wakely, Jr)
20. Mixed cortical adenoma and composite pheochromocytoma-ganglioneuroma (L Weiss)
21. Invasive paraganglioma incompletely excised; nine regional lymph nodes negative for metastatic tumor (BM Wenig)
22. Unusual spindle cell lesion with extensively hyalinized stroma, NOS (E Zambrano)
23. Plexiform fibrohistiocytic tumor/cellular neurothekeoma (H Dominguez-Malagon)
24. Dedifferentiated solitary fibrous tumor? Dedifferentiated peripheral nerve sheath tumor (perineurioma)? (H Dominguez-Malagon)
25. ?? Epithelioid vascular neoplasm ?? Primitive cartilaginous tumor ??Extraskelatal myxoid chondrosarcoma (S Suster)

## SEMINAR 58

1. (Analogized to a) Quiz-case. 17-year- old male presented with 18 cm sized solid and cystic mass on the right “posterior knee” (Cam5.2 strong diffuse positive; AE1:AE3 focal; Actin (MSA) negative; INI total loss of nuclear labeling in the tumor cells; S100 negative; CD31 negative; Desmin negative. FISH had been done on the biopsy and was negative for EWSR1 gene rearrangement). Diagnosis: will follow. (V Adsay)
2. Periprostatic gastro-intestinal stromal tumor (D Ben Dor)
3. Yttrium associated gastritis (O Ben-Itzhak)
4. Medullary carcinoma of the thyroid with glandular/cribriform pattern (G Berry)
5. Phosphaturic mesenchymal tumor, mixed connective tissue type (M Bisceglia)
6. Sporadic lymphangiomyomatosis involving lymph nodes and lung (M Bisceglia)
7. Unclassified non-pleomorphic renal sarcoma (possibly de novo malignant solitary fibrous tumor of kidney) (M Bisceglia)
8. Massive embolic foreign material consistent with microcrystalline cellulose (from crushed up oral tablets, type unknown) with associated pulmonary hypertension and right ventricular hypertrophy (TV Colby)
9. Pseudotumoral intracranial Erdheim-Chester disease (polyostotic sclerosing histiocytosis) mimicking a primary brain-meningeal tumor as manifestation of previously undiagnosed systemic disease (G Elmberger)
10. Atypical mesothelial tumor, not otherwise specified (G Falconieri)
11. Mucinous carcinoma of the skin. (F Fedeli)
12. Cotyledonoid dissecting leiomyoma of the uterus (Sternberg tumor) (M Fukunaga).
13. Colon with focal transmural ischemic necrosis following Kayexalate treatment for hyperkalemia (T Krausz).
14. Reticular schwannoma (T Mentzel)
15. Fibrous hamartoma of infancy (E Montgomery)
16. Soft tissue chondroma vs chondroid tumor of unknown malignant potential (S Ramon y Cajal)
17. Clear cell ovarian adenocarcinoma arising in association with a dermoid cyst with striking verrucous hyperplasia (J Sickel)
18. Acquired thymic multilocular cyst with epithelial hyperplasia (medullary) and prominent lymphoplasmacytic and follicular lymphoid hyperplasia (D Spagnolo)
19. Metanephric adenoma (P Wakely, Jr)
  - Quiz Case : Myospherulosis (J Sickel)
  - Quiz case 2: ..... (S Suster)