Case # 1 (HPS-288-84)
Contributed by Joseph T. Fay, Col DC, Deputy Commanding Chief, Pathology Department of The Army, Headquarters, 10th Medical Laboratory, APO, N.Y.

Twenty year old Caucasian female, noted a sore mass posterior to the sternocleidomastoid muscle on the right side.

Case # 2
Contributed by Louis S. Hansen, DDS, MS, MBA, Professor & Chairman, Division of Oral Pathology, University of California, San Francisco.

A fine needle biopsy was performed on a painless, parotid mass in a 29 year old man. The preoperative diagnosis was Warthin's tumor vs. mucoepidermoid carcinoma. The mass was then excised at an outside hospital.

Case # 3 (S84-4804 D-1 & F-3)
Contributed by Noel Weidner, M.D., Bowman Gray Medical School, Winston-Salem, North Carolina.

42 year old male who developed right nasal obstruction over a two year period secondary to a mass in the right ethmoid/maxillary sinus area. X-ray showed local boney erosion. The tumor was removed piecemeal via a transantral and external transethmoid approach.

Case # 4 (84-617, EFSCH: 51203)

17 year old Caucasian female who was seen by an orthodontist because of a loose tooth in the left maxilla. Roentgenogram showed an osteolytic lesion of the left maxilla destroying the roots of the left first molar and displacing the roots of the second molar and left maxillary bicuspid. A roentgenogram and representative sample of the lesion are included.

Case # 5 (3953-84)
Contributed by Yvon Legal, M.D., Faculte De Medecine, Institut D'Anatomie Pathologique, Strasbourg, France.

Tumor of soft palate in a female patient 20 years old. X-rays unremarkable.
Case # 6 (1404-84)
Contributed by Dr. James W. Seay, Norman Municipal Hospital, Norman, Oklahoma and Dr. Douglas Hoy, Norman, Oklahoma via Michael D. Rohrer, D.D.S., M.S., Richard T. Glass, D.D.S., Ph.D. and Stephen K. Young, D.D.S., M.D.

This is a 49 year old white male who presented to an oral surgeon with a subcutaneous nodule overlying the right zygomatic arch. It was originally thought to be a cyst which had enlarged over the last two to three months. An aspiration was attempted which yielded mucoid debris. The lesion was excised about a week later.

Case # 7 (84-777)
Contributed by Bruce Barker, D.D.S. and Charles Dunlap, D.D.S., Department of Oral Pathology, University of Missouri-Kansas City School of Dentistry.

A 53 year old male had a gingival tumor in the left maxilla. Teeth were loose and were extracted but a progressive growth occurred and a biopsy was taken.

Case # 8 (84-1300 A & B)
Contributed by Bruce Barker D.D.S. and Charles Dunlap, D.D.S., Department of Oral Pathology, University of Missouri-Kansas City School of Dentistry.

An 80 year old female with whitish exophytic lesion covering soft palate and lingual aspect of mandible. The lesions were found on routine examination and no other history was available. "A" is from the mandible. "B" is from the soft palate.

Case # 9 (84-A-738A3)
Contributed by Bruce Barker, D.D.S. and Charles Dunlap, D.D.S., Department of Oral Pathology, University of Missouri-Kansas City School of Dentistry.

An adult male was stated to have a recurrent tumor of the jaw. Radiographs were interpreted as showing a tumor of the left ramus consistent with odontogenic tumor. Your slide is the recurrent tumor. We have not been able to learn how long ago the primary occurred nor the tissue diagnosis.
Dear Carlos:

Here are my diagnostic impressions on the slides that you kindly sent me from the Oral Pathology Seminar #85, to be held on October 16, 1984.

Case 1: Necrotizing lymphadenitis. I favor the diagnosis of a reactive and probably infectious process over that of malignant lymphoma. Specifically, I think that the clinical and pathologic features of the case are very similar to those of the cases described as "necrotizing lymphadenitis" by Turner et al. (Am. J. Surg. Pathol., 7:115, 1983).

Case 2: This is obviously a benign cystic lesion in the family of Warthin's tumor, although one might like to designate it as "benign lymphoepithelial cyst" because of the fact that cytoplasmic acidophilia is nearly absent.

Case 3: I think that this very cellular spindle cell tumor is malignant, and I favor for it the diagnosis of fibrosarcoma. An alternative which I also considered was that of neurofibrosarcoma.

Case 4: This is a sarcoma with areas of hemangiopericytoma-like appearance alternating with foci suggesting cartilaginous and perhaps even osteoid differentiation. My differential is between osteosarcoma and mesenchymal chondrosarcoma.

Case 5: Benign mixed tumor (pleomorphic adenoma) with marked prominence of "hyaline cells" of probable myoepithelial derivation, as described by Azzopardi in Histopathology, 2:77, 1978.

Case 6: Nodular fasciitis. It may correspond to the variant of this disorder designated as "cystic" by Angervall (Pathol. Europ., 7:211, 1972).
Case 7: Squamous cell carcinoma with focal sarcomatoid features.

Case 8: Well differentiated squamous cell carcinoma arising in the background of keratosis having lichen planus-like features. I think that the tumor has too much atypia to qualify as verrucous carcinoma.

Case 9: I would fit this tumor into one of the many morphologic variants of ameloblastoma.

Best personal regards,

Juan Rosai, M.D.
Professor, Laboratory Medicine and Pathology
Director of Anatomic Pathology
(HPS-288-84) NECROTIZING LYMPHADENITIS
Contributed by Joseph T. Fay, Col DC, Deputy Commanding Chief, Pathology Department of The Army, Headquarters, 10th Medical Laboratory, APO, New York.

Several of the consultants agree with the diagnosis of necrotizing lymphadenitis including SCIUBBA and KAHN from Stony Brook, YOUNG, ROHRER and GLASS from the University of Oklahoma, HORI from West Virginia, LUNA and BATSAKIS from M.D. Anderson, MORASCO from Kirksville, ABRAMS from USC commented: "This looks like a strange necrotizing lymphadenitis. I do not know the etiology. Probably infectious.

AUFDENORTE from the University of Texas, San Antonio: "Necrotizing reactive lymphadenitis, differential includes infectious disease, also rule out lymphoreticular neoplasm such as Burkitt's or lymphocyte-predominate Hodgkin's.

ROSAI from Minnesota "necrotizing lymphadenitis." I favor the diagnosis of a reactive and probably infectious process over that of malignant lymphoma. Specifically, I think that the clinical and pathologic features of the case are very similar to those of the cases described as "necrotizing lymphadenitis" by Turner, et al (American Journal of Surgical Pathology 7: 115, 1983.

WEIDNER from Bowman Gray in Winston-Salem, North Carolina, "I favor a diagnosis of necrotizing lymphadenitis. This case seems to fit with the lesion described by Elmoto, et. al. (Acta. Pathol. Jpn. 33:863-879, 1983) as a "histiocytic necrotizing lymphadenitis" and Turner, et. al. as "necrotizing lymphadenitis".

There were many other diagnoses, some of which interpreted the lesion as lymphadenitis with focal necrosis suggestive of viral origin; atypical reactive lymphohistiocytic hyperplasia, reactive lymphadenopathy with necrosis, cat scratch disease and the like. In addition, there were many also who considered the possibility of a malignant process including angiohistiocytic lymphadenopathy, Hodgkin's disease, undifferentiated metastatic carcinoma, Burkitt's lymphoma, or malignant lymphoma, histiocytic type.

The present biopsy that was performed during March of the present year, a follow-up will be obtained.
**Case #2**

**BENIGN LYMPHOEPITHELIAL CYSTS OF THE PAROTID**

Contributed by Louis S. Hansen, DDS, MS, MBA, Professor & Chairman, Division of Oral Pathology, University of California, San Francisco.

Dr. HANSEN commented: "We submit this which we believe to be a benign lymphoepithelial cyst of the parotid. We thought that this was interesting because a fine needle biopsy picked up lymphoid tissue and some mucous cells leading to the preoperative diagnosis."

It appears that this diagnostic dilemma was not solved among the consultants. A random selection diagnoses are as follows: WALDMOR and EL-MOFTI Washington University "cystic well differentiated mucoepidermoid carcinoma. It appears to be arising in an intra-parotid node which is most unusual." Hori from West Virginia "Warthin's tumor with squamous and mucous metaplasia. Dr.'s ROWE and STEWART from Ann Arbor, Michigan, "lymph node with multiple epithelial cysts. The differential diagnosis bronchial cleft cyst or an incompletely developed or early Warthin's cyst." SHAFER from Indiana "Warthin's tumor versus a benign cervical lymphoepithelial cyst". TARPLEY and CORIO from from NIH "mucous cystadenoma but some focal areas have histologic features of a low grade mucoepidermoid carcinoma. DUNLAP and BARKER from Kansas City, Mo. "Warthin's tumor with squamous and mucous changes. HYMES and HEFFNER from the AFIP "low grade mucoepidermoid carcinoma". ROSAI from Minnesota "this is obviously a benign cystic lesion in the family of Warthin's tumor, although one might like to designate it as benign lymphoepithelial cyst because of the fact that cytoplasmic acidophilia is nearly absent". AZAR from Tampa "neoplasm with features of both Warthin's tumor and mucoepidermoid tumor. (squamous metaplasia and Warthin's tumor)." AUFDEMORTE from San Antonio "Warthin's tumor, parotid." BATSAKIS and LUNA M.D. Anderson "low grade mucoepidermoid carcinoma (in Warthin's tumor?)". LUMMERMAN from Flushing, New York "mucoepidermoid carcinoma, moderate grade". WHITE from Kentucky "Warthin's tumor with squamous metaplasia". LEGAL from Strasbourg, France "So called "amygdaloid cyst". It is unusual in the parotid. Most of the time it is found in the submaxillary gland. It has nothing to do with the branchial cleft". GLASS, YOUNG, and ROHRER from Oklahoma City "Warthin's tumor". SCIUBBA and KAHN from Stony Brook "cystic mucoepidermoid carcinoma". BERTHONG from Colorado Springs "I thought it to be a mucoepidermoid carcinoma, Grade I, which appeared to be metastatic" while EUSEBI from the University of Bologna prefer adenolymphoma in a lymph node.

**Case #3**

(S84-4804 D-1 & F-3) **LOW GRADE FIBROSARCOMA**

Contributed by Noel Weidner, MD, Bowman Gray School of Medicine, Winston-Salem, North Carolina.

Dr. Weidner commented "I believe this is a soft tissue neoplasm, is a low grade fibrosarcoma and very similar to Case #2 (2608-81) from Oral
Pathology Seminar #82 of December 13, 1983." The diagnosis of a low grade fibrosarcoma was made among others by HEFFNER and HYAMS from the AFIP, MEYER from Jewish Hospital in St. Louis, Hori from Elkins, West Virginia, LUNA and BATSAKIS from M.D. Anderson, DUNLAP and BARKER from Kansas City, Missouri, MORASCO from Kirksville, BERTHRONG from Colorado Springs, EUSEBI from Bologna. GNEPP from St. Louis University commented "spindle cell neoplasm, schwannoma versus fibromatosis versus low grade fibrosarcoma, favor fibromatosis." SANTA CRUZ from Washington University "fibromatosis versus low grade fibrosarcoma." HAMMOND, VINCENT, FINKELSTEIN, DEMBO, DEAHL, LUNDQUIST from Iowa "aggressive fibromatosis versus fibrohistiocytoma" while HANSEN from San Francisco "we could no better than malignant spindle cell neoplasm. Possibly smooth muscle or neural origin." LE GAL from Strasbourg preferred "neurilemmoma." YOUNG, GLASS and ROHRER from the University of Oklahoma "benign spindle cell tumor probably neurofibroma versus leiomyoma." SHAFER from Indiana preferred "neurofibrosarcoma." TARPLEY and CORIO FROM NIH "aggressive fibromatosis with histologic features of a low grade fibrosarcoma." ABRAMS from USC "without benefit of immunohistologic and histochemical preparations, a diagnosis of leiomyosarcoma is favored." SCIUBBA and KAHN from Stony Brook "benign nerve sheath tumor." ROSAI from Minnesota "I think that this very cellular spindle cell tumor is malignant and I favor for it the diagnosis of fibrosarcoma. An alternative which I also considered was that of neurofibrosarcoma." Dr. EL MOFTI from Washington University who discussed the case during this presentation offer "aggressive fibromatosis versus well differentiated low grade fibrosarcoma. I suppose it would be nice to rule out other spindle cell processes with appropriate stains."

CASE # 4 (84-617, EFSCH: 51202) OSTEOSARCOMA
Contributed by Richard Graham, DDS, and John Hanson, DDS, Jefferson City, MO. and Carlos Perez-Mesa, MD, EFSCC, Columbia, MO.

It was also the diagnosis of HEFFNER, YOUNG, ROHRER, and GLASS from Oklahoma City, ROWE and STEWART from Ann Arbor, HANSEN from San Francisco, HAMMOND, VINCENT, FINKELSTEIN, DEMBO, DEAHL & LUNDQUIST from Iowa, AZAR from Tampa, SPRAGUE from Nebraska, OXENHANDLER & MOON from Chattanooga. GNEPP from St. Louis University commented "mesenchymal neoplasm, malignant, chondrosarcoma versus osteosarcoma. Need additional slides." AUDEMACARTE from San Antonio "hemangiopericytoma, can also find areas like these in mesenchymal chondrosarcoma but cannot make that diagnosis on the material. The differential includes other small or intermingled cells undifferentiated malignant neoplasm." Hemangiopericytoma was also suggested by MEYER from Jewish Hospital in St. Louis, SHAFER from Indiana, HORI from Elkins, West Virginia. BERTHRONG from Colorado Springs commented "I will call it hemangiopericytoma. My batting average with hemangiopericytomas is very poor. Most of the time when I call it, it is not. When I don't think
of it, it is. I still think this is a hemangiopericytoma." DEAN WHITE from Kentucky commented "fibrosarcoma. Areas of hyalinization are suggestive of osteoid and therefore of an osteosarcoma; but the quality of stain precludes a definite interpretation of this material." Fibrosarcoma was also the diagnosis of SANTA CRUZ from St. Louis, DUNLAP & BARKER from Kansas, WALDRON and EL MOFTI from Washington University prefer mesenchymal chondrosarcoma which was also the diagnosis of ABRAMS from USC, EUSEBI from Bologna, LUMMERMAN from Flushing, ROSAI from Minnesota commented "this is a sarcoma with areas of hemangiopericytoma like appearance alternating with foci suggesting cartilagenous and perhaps osteoid differentiation. My differential between osteosarcoma and mesenchymal chondrosarcoma." KAHN from Stony Brook felt that this was a sarcoma which was predominately of a hemangiopericytoma type pattern although osteosarcoma could not be ruled out." SCIUCCA felt a bit more strongly about osteosarcoma and does favor this as a primary diagnosis. The hyaline material formed in small quantities in a few areas of the tumor was sufficient in my mind to qualify as malignant osteoid and hence, the osteosarcoma designation."

An en bloc resection of the lesion was performed and there were numerous areas in which the presence of osteoid was clearly evident.

CASE # 5 (3953-84) MYOEPITHELIOMA
Contributed by Yvon Le Gal, M.D., Faculte De Medecine, Institut D'Anatomie Pathologique, Strasbourg, France

With a few exceptions, almost everybody thought there was a benign lesion, a pleomorphic adenoma with predominant myoepithelial features. DR. LE GAL as the contributor stated, "I have proposed myoepithelioma of the salivary gland (Kahn, B. and L. Schoub. Myoepithelioma of the palate. Histochemical and ultra-structural observations. Arch. of Path. 95, p. 209, 1973. Samples of diagnoses: HEFFNER and HYAMS of the AFIP "benign mixed tumor (with many plasmacytoid myoepithelial cells. ROSAI from Minnesota "benign mixed tumor (pleomorphic adenoma) with marked prominence of "hyaline cells" of probable myoepithelial derivation, as described by Azzopardi in Histopathology, 2:77, 1978." MEYER from Jewish Hospital "myoepithelioma, plasmacellular type. Sciuuba and Brannon reported that surgery was curative in this type of tumor of major and minor salivary glands (Sciuuba JJ, Brannon RB. Cancer 49:562-572, 1982." TOTO from Loyola "plasmacytoid myoepithelioma." FAY, LIN, DYER, WAGSTAFF from the 10th Medical Laboratory in Germany prefer "benign mixed tumor (Bmt/myoepithelial type)." LUMMERMAN preferred myoepithelioma and HANSEN from San Francisco commented "we believe that electron microscopy would prove this tumor to be a myoepithelioma." BATSAKIS and LUNA also call it "mixed tumor with numerous hyaline myoepithelial cells (so called hyaline cell myoepithelioma)." There were several other diagnoses which included rhabdomyosarcoma, osteosarcoma, chordoma, paraganglioma, pituitary adenoma, myxopapillary ependymoma.
NODULAR FASCITIS
Contributed by Dr. James W. Seay, Norman Municipal Hospital, Norman, Oklahoma and Dr. Douglas Hoy, Norman, Oklahoma via Michael D. Rohrer, DDS, MS, Richard T. Glass, DDS, Ph.D., and Stephen K. Young, DDS, MD.

Nodular fascitis was the favorite diagnosis of landslide proportions. There were, however, a few dissenters offering the diagnosis of rhabdomyosarcoma, neurilemoma, myxoma, and fibrous histiocytoma. A few commentaries: WALDRON and EL MOFTI from Washington University "myxoid type nodular fascitis." ROSAI from Minnesota, "nodular fascitis." "It may correspond to the variant of this disorder designated as "cystic" by Angervall (Pathol. Europ., 7:211, 1972)."

SARCOMATOID SQUAMOUS CELL CARCINOMA
Contributed by Bruce Barker, DDS, and Charles Dunlap, DDS, Department of Oral Pathology, University of Missouri-Kansas City School of Dentistry, Kansas City, MO.

This was a unanimous choice without dissension.

A few comments: SCUBBA & KAHN from Stony Brook "spindle cell carcinoma. The extreme pleomorphism of the stroma was most dramatic." TOTO from Loyola "squamous carcinoma with a spindle cell phenotype." SHAFER from Indiana "epidermoid carcinoma with a spindle cell and myxoid areas. I really worry about what I would call a biopsy if it were from a myxoid area and showed nothing else." LE GAL from Strasbourg "epidermoid carcinoma spindle cell type.

HYBRID "VERRUCOUS CARCINOMA VERSUS GRENSPAN TYPE 3 VERRUOUS CARCINOMA"
Contributed by Bruce Barker, DDS, and Charles Dunlap, DDS, Department of Oral Pathology, University of Missouri-Kansas City School of Dentistry, Kansas City, MO.

What follows is a selection of interpretations of both A&B lesions: HEFFNER and HYAMS from the AFIP "specimen (A) keratotic papilloma specimen (B) squamous cell carcinoma." WALDRON and EL MOFTI from Washington University "this is one of those borderline lesions, verrucous carcinoma versus papillary squamous cell carcinoma. I suspect it really makes little difference in prognosis and I could make a case for either diagnosis." "(B) verrucous epithelial hyperplasia with focal dysplasia. I saw a number of lesions like this at Emory and we use
to call this "snuff dippers creeping cruds". This is not cancer now but I suspect it would eventually become cancer." **WEATHERS** from Emory, "Slide (A) seems to represent a very well differentiated squamous cell carcinoma, however, there is too much pleomorphism to really call this a verrucous carcinoma in my opinion." "Slide (B) is a markedly proliferative hyperkeratosis that I would prefer to call atypical epithelial hyperplasia and probably a very similar if not identical to the verrucous hyperplasia described by Pindborg." **EUSEBI** from Bologna "well differentiated squamous cell carcinoma." **ROSAI** from Minneapolis "well differentiated squamous cell carcinoma arising in a background of keratosis having lichen planus-like features. I think that the tumor has too much atypia to qualify as verrucous carcinoma."

**ABRAMS** from USC "(A) the specimen has too much pleomorphism to justify a verrucous carcinoma diagnosis. Prefer well differentiated papillary squamous cell carcinoma." "Specimen (B) is verrucous keratosis with moderate dysplasia." **MEYER** from Jewish Hospital "squamous cell carcinoma, not verrucous, arising in hyperkeratosis of amazing degree (would win a prize at state fair)." **WEIDNER** from Bowman Gray "invasive well differentiated squamous cell carcinoma which seems to be arising in association with a like and plantus-like keratosis." **TARPLEY** and **CORIO** from NIH "(A) verrucous carcinoma, some may feel comfortable with the term verrucoid carcinoma. "(B) verrucous hyperplasia." **WHITE** from Kentucky "(A) squamous cell carcinoma." "(B) epithelial dysplasia, hyperkeratosis and epithelial atrophy." **LUMMERMAN** "(A) squamous cell carcinoma." "(B) papillary epithelial hyperplasia with dysplasia." **HANSEN** from San Francisco "very suggestive of why we have been calling proliferative verrucous leukoplakia. The mandibular lesion we would diagnose as Grade 8, well differentiated papillary carcinoma. "The palatal lesion as Grade 4 similar to what has been described microscopically as verrucous hyperplasia." **SHAFER** from Indiana "(A) this appears to be an epidermoid carcinoma that has developed in a verrucous carcinoma of Ackerman (sometimes spoken of as a verrucous carcinoma in the process of going bad)." "(B) this is unhappy epithelium and, when it is unhappy, I am unhappy about it. It certainly is not the usual dysplastic epithelium and I would have trouble calling it dysplastic. However, I think it is bad." **LUNA** and **BATSAKIS** from M.D. Anderson "(A) hybrid verrucous carcinoma versus papillary squamous carcinoma, additional sections needed. The lesion is too atypical for pure verrucous carcinoma." "(B) keratosis."

"Verrucous-Squamous Carcinomas of the Oral Cavity," Jesus E. Medina, MD; MAJ William Dichtel, MC, USA; Mario A. Luna, MD, ARCH. Otolaringol. 110: 437, 1984 and "Oral Florid Papillomatosis (Verrucous Carcinoma)," David Grinspan, MD; Jorge Abulafia, MD. International Journal of Dermatology 18: 608, 1979.)
Almost without exception, the diagnosis submitted by the consultants was ameloblastoma. In order to appreciate the full flavor of the case, included is a letter that Charles Dunlap wrote: "Dear Carlos: ....... This patient had been referred to a surgeon in Kansas City with a diagnosis of ameloblastoma of the jaw and a radiograph had been interpreted as showing a tumor in the left ramus of the mandible. When he arrived in Kansas City, no tumor could be found and he was re-x-rayed. No tumor was seen in the ramus and upon questioning the surgeon, it became apparent that there was some uncertainty as to precisely what location this biopsy was taken. Not only the radiographs fail to reveal a tumor but clinical examination showed no evidence of a soft tissue or intrabony tumor mass. The patient had an earlier history of having had a "skin tumor" removed from his face and was stated to have a scar on the skin anterior to the angle of the mandible. Apparently this recent biopsy was a re-excision of a subcutaneous skin mass and represents a recurrent basal cell carcinoma, not an ameloblastoma."