COMMENTS TO AMR SEMINAR #61

CASE NO. 1 – CONTRIBUTED BY PHIL ALLEN

Abbas Agaimy: Nice case. Partial circumscription is seen in one of the slides and could be tricky on limited biopsy.

Carlos Bacchi: Nice example of aggressive angiomyxoma. In slide 1b there is a convincing area of muscle infiltration.

David Ben-Dor: The histology looks so deceptively bland and on slide A the tumor looks extremely well circumscribed. On slide B there is some percolation of tumor cells into the surrounding smooth muscle. A needle biopsy of such a lesion (especially if passing through the periphery of the lesion as seen in slide A) would be prone to misinterpretation by the unwary.

Michele Bisceglia: Agree, nice case. No I have not any experience with superficial forms of aggressive angiomyxoma which recurred or metastasized nor have any experience with these tumours being treated with GH-RH agonists, although one sees the rationale for this type of treatment given that the tumour can express steroid hormone receptors.

Ira Bleiweiss: Agree. Aggressive angiomyxoma.

Thomas Colby: Agree with diagnosis of aggressive angiomyxoma.

Kum Cooper: Deep "aggressive" angiomyxoma. The HMGA2 is said to be useful in distinguishing the differential diagnosis at this site (vulva).

Otto Dietze: I have seen very few cases of angiomyofibroblastoma and aggressive angiomyxoma. The last case recurred after incomplete resection, but I don't know of a metastasizing case.

Goran Elmberger: Nice case and discussion. No personal experience.

Franco Fedeli: Agree nice case. Have not previously seen anysuperficial case of aggressive angiomyxoma. Probably the superficial form is much rarer than the classical deeply infiltrating perineal form.

Cyril Fisher: Aggressive angiomyxoma, nice example.

Christopher Fletcher: Aggressive angiomyxoma – convincing example. The lesion has infiltrative margins, thick-walled blood vessels and characteristically bland spindle cell morphology. I agree with Phil that these lesions are definitionally deep-seated – virtually all lesions diagnosed as AAM in superficial locations turn out to be either a fibroepithelial stromal polyp or else superficial angiomyxoma. I have never personally seen a case metastasize but I am aware of two reported examples, of which only one is potentially believable.

Jeronima Forteza: I agree with the diagnosis of aggressive angiomyxoma. Although histology is strictly benign, the tumor shows local aggressiveness. I have previously seen recurrent cases but without metastasizing. In my experience, I have not had any cases with luteinizing or gonadotropin-releasing hormone agonist.

Giovanni Falconieri: I agree. Great example and excellent discussion; thanks Phil for contributing your opinion and offering your valuable diagnostic approach to aggressive angiomyxoma.

Thomas Krausz: Agree with diagnosis. I have seen one case which recurred after incomplete excision. I did not know about the recently used luteinizing and gonadotrophin-agonist therapy.

Janez Lamovec: I've seen a couple of these cases, both aggressive angiomyxoma and angiomyofibroblastoma in female patients; all of them were morphologically "pure", no mixed forms were seen.

Hugo Dominquez Malagon: This is a nice example of aggressive angiomyxoma, no experience with treatment with hormone releasing agonists.

Markku Miettinen: Looks good for aggressive angiomyxoma

Cesar Moran: Very nice example and interesting discussion.

Liz Montgomery: Aggressive angiomyxoma seems fine. I wish I could tell you something from personal experience about using various hormone agonists for these.

Dominic Spagnolo: Agree. Nice example of aggressive angiomyxoma. And NO to the questions you posed Phil. Thanks for the case.

Ady Yosepovich: A very nice example, agree with the diagnosis.

CASE NO. 2 – CONTRIBUTED BY CARLOS BACCHI

Abbas Agaimy: Very unusual case. At first glance, I thought this should be "ectopic hamartomatous thymoma". The immunoprofile is quite confusing. Low grade MPNST might be a good differential but the cell nests looks quite cohesive and epithelial. Alternatively, this case might represent an unusual variant of mixed tumor of soft tissue, but lack of pankeratin would be again unexpected. Was the tumor positive for GFAP or other "facultative" myoepithelial markers? I have never seen similar case.

Phil Allen: Undiagnosed, S100 positive, sclerosing keratin negative epithelioid tumor with dense fibrous stroma and lymphoid infiltrate, posterior mediastinum. I don't know what this is and I have not seen or read about a similar tumor. I suspect it is a thymic tumor but it does not correspond to any of the described variants. I don't know how it will behave.

David Ben-Dor: Agree that it looks very bland and also epithelioid. Why are the lymphoid follicles there- is it involving the thymus?

Michele Bisceglia: MPNST, low- grade, epithelioid variant. Very unusual tumour. No better suggestion than the one you proposed.

Ira Bleiweiss: I don't think this is benign or low grade. I would have thought carcinoma, but for the negative keratins. Perhaps MPNST.

Thomas Colby: All of my ideas were shot out of the water with the negative immunostains. I have a hard time making this into a neural process. I have never seen Langerhans' cells do this sort of thing, but there is an exuberant lymphoid proliferation and negative CD1a could be comforting. I would be descriptive and say that I am not convinced that it is malignant and don't know what it is.

Kum Cooper: Carlos, I also wondered about ectopic thymic carcinoma (low-grade).

Otto Dietze: I favor MPNST due to S100 positivity, but have never seen this tumor with a similar morphology.

Goran Elmberger: Tough case. The origin in posterior mediastinum usually favours nerve sheath tumors but the GFAP- and morphology seems against this dx. The intimate relationship between inflammatory cells and neoplastic cells seems important. If CK negative it should rule out thymoma. Neither mesothelial or ganglion-derived. I guess I am most suspicious of an hematological neoplasm since the fibrosing chronic reaction is a bit similar to sclerosing mediastinitis –possibly IgG4 sclerosing disease. IgG4 IHC? More markers should be applied to penetrate ddx of lymphoma (T) or more specifically dendritic cell neoplasms which are at the top of my differential. IDC? LCS??

Franco Fedeli: MPNST, low- grade, epithelioid variant. Very unusual tumour as well as a difficult case to typify.

Christopher Fletcher: This is a very unusual lesion, the morphology of which I do not recognize. Some of the architectural features indeed raise the possibility of an ectopic thymic lesion. On the basis of the relatively uniform ovoid cytomorphology in many areas, I would have considered the possibility of a myoepithelial neoplasm. A strange case indeed.

Jeronima Forteza: Firstly, I share Suster's opinion about being a low-grade mesenchymal tumor. Because of his authority, I feel comfortable with that diagnosis. However, the possibility of it being an intedigitating dendritic cell tumor could also be considered, based on the expression of S-100 protein. But we should be cautious, since we cannot rely on the positivity of just one marker.

Giovanni Falconieri: Difficult case, Carlos. No idea whatsoever, although I agree that it does not look terrifically malignant.

Thomas Krausz: Difficult, I am not sure, but I agree with your and Saul's differential diagnostic considerations. Perhaps a schwannoma with neuroblastoma-like/plexiform areas and low grade-MPNST transformation? I also considered myoepithelial neoplasm, but no keratin or EMA. I would suggest further immunos for collagen IV/laminin and INI1, and EM.

Janez Lamovec: I don't know what this is but the tumor appears strikingly epithelioid although epithelial markers are negative. I cannot argue with thymoma experts but to me ectopic thymoma wouldn't be such a bad possibility in spite of immuno results.

Hugo Dominquez Malagon: At first glance it appeared to me as a thymoma, but the immune profile certainly is inconsistent. Other possibilities would be epithelioid MPNST, and myoepithelioma.

Markku Miettinen: Cannot be sure of this one. Assuming strong S100+, considered melanocytic neoplasm, and could also speculate about interdigitating reticulum cell sarcoma, considering the association with lymphoid tissue. Cannot link with MPNST. Has an overall low-grade appearance.

Liz Montgomery: Like you, I considered an interdigitating dendritic cell tumrs (as well as a follicular dendritic cell tumor) but am not too confident about the diagnosis.

Cesar Moran: Difficult case, which reminded me of a case from AMR 52, case 1 by Dr. Adsay about Clear Cell Sarcoma. I do not believe that this is thymoma or myxopapillary ependimoma.

Dominic Spagnolo: The several colleagues with whom I have shared the case and I have not seen this S100+ neoplasm before, either in the mediastinum or elsewhere. Like you we have considered a very wide range of possible diagnoses, but nothing gels. A dendritic cell tumour, odd clear cell sarcoma or some unspecified clear cell neoplasm of probable neuroectodermal derivation were high on the list (has EWS been looked at by FISH?). Even an atypical/malignant OFMT entered discussions. The intimate relationship of the tumour cells to the reactive follicles is intriguing, thus a follicular dendritic cell sarcoma is still a consideration despite the negative markers. An interdigitating reticulum cell sarcoma also needs consideration given the S100-only phenotype, though I have never seen one with this epithelioid morphology, sclerosis and inflammation. Ultrastructural scrutiny would be useful in this circumstance. The possibility of a hybrid dendritic cell tumour also needs consideration (J Clin Pathol 2002; 2002;55:791–794. Mediastinal mixed dendritic cell sarcoma with hybrid features. Dillon KM et al). Looking forward to others' thoughts. Looks like it should have a name!

Saul Suster: Sorry – still don't know what this tumor is! The only thing that comes close is an epithelioid peripheral nerve sheath tumor, but the pattern of growth is wrong for that entity. A metastasis of malignant melanoma that is only S-100 protein positive could also be a possibility. Finally, the short, slender tongues of tissue composed of epithelioid cells seen at one edge of the lesion are very reminiscent of ectopic hamartomatous thymoma, although the rest of the lesion and the markers don't quite fit for that. Carlos, we'll need you to keep us posted in case any further development sheds light on this case.

Ady Yosepovich: Very challenging lesion – maybe consider a peculiar germ cell tumor – there are seminoma-like areas – would have stain in that direction too.

CASE NO. 3 – CONTRIBUTED BY MICHELE BISCEGLIA

Abbas Agaimy: I could recall at least one postmortem case that I have seen several years ago, but I am not sure if that case was associated with any connective tissue disease. Nice and illustrative case, thanks.

Phil Allen: Diffuse dendriform pulmonary ossification associated with mediastinal bronchogenic cyst and a rheumatologic diagnosis of systemic sclerosis. I will be very interested to hear what the pulmonary experts have to say about this case. I found a few recent articles on dendrifrorm pulmonary ossification but on a superficial examination, none of them seem to be quite the same as this case.

Carlos Bacchi: Interesting case. Never seen this type of ossification of the lung (diffuse dendriform pulmonary ossification) before.

David Ben-Dor: Very impressive pulmonary fibrosis with dramatic ossifications. What's also interesting is the variability in involvement with severe changes in part of the slide with much less or even normal tissue in adjacent portions. Is this typical for scleroderma lung?

Ira Bleiweiss: Never seen this before.

Thomas Colby: Agree with diagnosis. Usually in cases like this we assume the ossification is an exuberant secondary reaction in a fibrosing interstitial pneumonia. Somewhat arbitrarily I tend to reserve the term diffuse pulmonary dendriform ossification to cases in which there is only diffuse bony nodules without the underlying fibrosing interstitial pneumonia

Kum Cooper: Pulmonary ossification.

Otto Dietze: Despite several cases of interstitial pulmonary fibrosis in our files, I have not seen this peculiar combination before.

Goran Elmberger: I agree on the diagnosis of dystrophic pulmonary ossification in background of end-stage fibrosis with honeycomb change. The nature of the bone i.e. mature, with fat & bone marrow is more in line with racemose /dendritic ossification but in my sections I could not see any convincing branching points. Whether dendritic/diffuse or localized/nodular may need input from radiology. The underlying etiology may well be systemic sclerosis if pulmonary process is diffuse and other findings are supportive but the finding of an associated foregut cyst in the mediastinum actually also raises the differential diagnoses to include other types of underlying malformative conditions such as sequestration. Need for anatomical – radiological – clinical correlation.

Franco Fedeli: Diffuse pulmonary dendriform ossification secondary to systemic sclerosis with interstitial lung disease. This is an interesting case of a diffuse form of pulmonary ossification due to an autoimmune disease.

Cyril Fisher: Incredible case!

Christopher Fletcher: Thanks as always for providing such an educational case, Michele – I have no personal experience with lesions of this type.

Jeronima Forteza: I agree with the diagnosis of systemic sclerosis with interstitial lung disease and diffuse pulmonary dendriform ossification. There is a component of ossification for which I find difficult to assess whether it is a secondary accompanying phenomenon or it belongs to the illness. I think it could be the former.

Giovanni Falconieri: What can I add Michele? Obviously, I have never seen it before. And if gotten across, I have missed it for sure.

Thomas Krausz: Great case. I haven't seen dendriform ossification of lung in cases of interstitial lung disease before.

Janez Lamovec: Never seen before. Another rarity from Michele. Thank you for submitting us this case.

Hugo Dominguez Malagon: Interesting case, I believe that the basic alteration is interstitial pneumonia with complete bone metaplasia including bone marrow formation.

Markku Miettinen: Multifocal metaplastic bone, interstitial fibrosis, and smooth muscle proliferation in the lung, seems to be consistent with dendriform pulmonary ossification.

Liz Montgomery: Medical lung makes my eyes glaze over but this is interesting to see.

Cesar Moran: Interesting case.

Dominic Spagnolo: Spectacular case of scleroderma lung with diffuse dendriform ossification. A first for me. I was unaware that pulmonary systemic sclerosis is so rarely the underlying factor with disseminated pulmonary ossification. Thanks Michele.

Ady Yosepovich: A fantastic case, thank you for sharing.

CASE NO. 4 – CONTRIBUTED BY MICHELE BISCEGLIA

Abbas Agaimy: Pretty case, the two cases nicely illustrate the well- known but unexplained phenomenon of seeing the same lesion twice a week and waiting several years or even longer for the third case to come.

Phil Allen: I did not see this case with the discussion and references until after writing my comments on Case 3. Thanks for the discussion Michele. It will be interesting to see if the pulmonary experts can add anything to your erudite comments. Our local expert, Doug Henderson, is presently on leave.

Carlos Bacchi: Amazing!

David Ben-Dor: In contrast to Case 3, here the parenchyma is mostly normal outside of the areas of ossification, which show some degree of anastomosis or at least more than I was impressed with in Case 3. It's remarkable to see multiple examples of this entity in one sitting. Did the pulmonologist try and take biopsies and if so, did he break the bronchoscope?

Ira Bleiweiss: I thought the slides got mixed up with case 3 somehow. How weird.

Thomas Colby: This is indeed a distinctive case. To be sure, there are diffuse nodular zones of ossification but in addition, there are very distinctive fibrous nodules that are somewhat tendonous in appearance and while I am not sure this pattern is entirely specific, this sort of fibrous tissue is what one sees in the lungs of patients with Ehlers-Danlos syndrome. Ehlers-Danlos (most are so-called vascular type or Type 4) involving the lung generally presents in younger individuals with history of recurrent episodes of hemorrhage and/or pneumothorax. I note in this case that there are patchy foci of old hemorrhage and one of the peculiar fibrous scars appears to involve the pleura and the notion is that in EDS this is a form of abnormal wound healing with abnormal collagen.

While a patient with known Ehlers-Danlos syndrome and this sort of histology would be an easy diagnosis, I am not sure that the converse is true: namely that this kind of distinctive collagen always means Ehlers-Danlos syndrome. In any case, I think it would be worthwhile looking further in this with that in mind. Typically in Ehlers-Danlos syndrome, the metaplastic ossification develops in the background of these distinctive fibrous nodules which have been termed "fibrous pseudotumors".

Corrin B, Simpson CGB, Fisher C. Fibrous Pseudotumors and Cyst Formation in the Lungs and Ehlers-Danlos Syndrome. Histopathology 1990; 17:478-479.
Kawabata Y, et.al. Pleuropulmonary pathology of vascular Ehlers-Danlos syndrome: spontaneous laceration, hematoma and fibrous nodules. Histopathology 2010; 56: 944-950.

Kum Cooper: Pulmonary ossification.

Otto Dietz: Another case of pulmonary ossification that I have not seen to a similar extent before.

Goran Elmberger: Nice case. Agree. Lex duplicitas! There is a severe component of hemosiderin deposition in the background which could be indicative of underlying cardiovascular disease with long-standing congestion but I guess we have to trust the negative clinical studies regarding underlying heart disease.

Franco Fedeli: This case is the complement of the previous one completing the spectrum of the disease and it is impressive that you received such a rare case the same day (and maybe the same hour of the day). Thank you, Michele, for sharing these two cases with all of us.

Christopher Fletcher: Even more remarkable than Case 3!

Jeronima Forteza: This second case, same entity as case 3, brings light to the doubts I had in the previous case. In the idiopathic diffuse pulmonary dendriform ossification is evident that ossification is an element of the lesion and disease.

Giovanni Falconieri: Ditto comment to case 3!

Thomas Krausz: My experience with dendriform ossification is limited to three or four autopsy cases (idiopathic forms). I remember performing an autopsy on one of these cases in which grossly spiculated bone punctured my gloves.

Hugo Dominquez Malagon: Extraordinary case, thank you.

Markku Miettinen: Metaplastic bone in lung, consistent with what has been reported as dendriform pulmonary ossification. I have no previous experience on this.

Cesar Moran: You have an epidemic of these lesions.

Dominic Spagnolo: Even rarer than case 3!

CASE NO. 5 – CONTRIBUTED BY MICHELE BISCEGLIA

Abbas Agaimy: Beautiful case, thanks for giving us the opportunity to see this rare type of myopathy. The stain is fascinating.

Phil Allen: Mitochondrial myopathy associated with progressive external ophthalmoplegia. Thanks again for the encyclopaedic discussion Michele.

Carlos Bacchi: Thanks for the case with such incredible discussion.

David Ben-Dor: I have the Gomori stained slide (marked A underneath the label) and seen many small red specks which remind me of AFB seen with Z-N.

Michele Bisceglia: Mitochondrial myopathy presenting with progressive external ophthalmoplegia (PEO). My case. After saying that each member received only one of the 2 special stains available in this case (either Gomori stain or COX-SDH stain), as I had already informed you by e-mail, please notice that you can look at the results of).http://www.amr-seminar.org/seminar/61/images.phpboth stains by going directly to

Ira Bleiweiss: I don't see it on my slide, but maybe I'm not at all experienced with these kinds of stains.

Thomas Colby: Can neither agree nor disagree with the diagnosis since it will be a cold day in hell when I am able to interpret frozen sections of muscle. Michele I admire your diversity as a pathologist. This appears to be a beautiful discussion although I must admit I am not confident enough to understand half of it.

Kum Cooper: Michele "ragged-red fibers" and "parking lot bodies" takes me many years back. Lovely stain!

Otto Dietze: Our specialist for EM & muscle biopsies agrees that on basis of case history, HC and EM this is a classical example of mitochondrial myopathy wit PEO.

Goran Elmberger: Wow! How very interesting. No wonder the neurologists keep that area for themselves at our hospital.

Franco Fedeli: Mitochondrial myopathy presenting with progressive external ophthalmoplegia (PEO). This is a typical case of neuromuscular disease of which I have just elementary education. This area of pathology is currently managed by neurologists. Still I appreciated very much receiving your slide and seeing in AMR website the pictures of both stains (Gomori stain as well as COX-SDH stain), which clearly shows the enzymatic mitochondrial defect, underlying this type of primary myopathy.

Cyril Fisher: Mitochondrial myopathy, very informative account - thank you Michele.

Jeronima Forteza: Typical case of mitochondrial myopathy. Thank you for such a good documented case.

Giovanni Falconieri: Impossible case, Michele. Nonetheless I appreciate you endless (and fruitless, sadly to say) efforts to educate people like me.

Thomas Krausz: Michele, is there any field of pathology you have no expertise on? Highly educational case. Great discussion. Thank you very much.

Hugo Dominquez Malagon: Interesting case of mitocondrial myopathy, and nice discussion, thank you.

Markku Miettinen: No comments, extraordinary documentation.

Liz Montgomery: Thank you for this treatise on mitochondrial myopathies.

Cesar Moran: I have no experience with muscle biopsy interpretation.

Dominic Spagnolo: This brings back memories of muscle biopsy days and looking at the ultrastructure of these cases of mitochondrial myopathy. It must be at least 20 years since I have seen a muscle biopsy now. Thanks for the encyclopaedic review Michele. It was clear in reading your dissertation that this field has well and truly passed me by!

CASE NO. 6 – CONTRIBUTED BY IRA BLEIWEISS

Abbas Agaimy: This case suggests for me a lesion from the family of fibroepithelial mammary lesions. I agree it is not typical phyllodes. However, based on the bland looking histology of the spindle cells and the architecture, I would rather call it "periductal something". I have always difficulty to recognize so-called "low grade periductal stromal sarcoma". I feel that the finger-like projections at the periphery and the overall structure is not typical for SFT. Will be glad to read the comments of other members.

Phil Allen: Unusual variant of fibroadenoma with cellular, CD34 positive storiform stroma, left breast. I think the epithelium is part of the tumor. CD34 is not a trustworthy disciple. He even suggested to me that this is a breast dermatofibrosarcoma protuberans with a secondary epithelial reaction, a suggestion I rejected out of hand. I would not be surprised if one day, CD34 denies solitary fibrous tumor more than three times.

Carlos Bacchi: I would agree with the diagnosis of SFT. Coud the dense hyaline material deposited in the acinar structures be amyloid? It polarized.

David Ben-Dor: It's a bird! It's a stork! Maybe a daschund? I agree that this could serve as the substrate for a Rorshach test. Is that why it was copyrighted? There seems to consistent fibrosis/hyalinization surrounding the ducts and involving the lobules. Is that consistent with any particular entity?

Michele Bisceglia: Solitary fibrous tumour of breast. Agree on this diagnosis. Quite unusual also the interstitial growth pattern with sparing of ducts and the periductal tumour collagenisation.

Thomas Colby: I would favor a stromal proliferation of the breast that might have the capacity to recur.

Kum Cooper: Ira, I thought that this represented a phyllodes tumor.

Otto Dietze: I cannot offer another diagnosis.

Goran Elmberger: That is a difficult case. Size? One can discuss whether it should be classified as a biphasic breast tumour or a purely mesenchymal tumour entrapping ducts. I favour classifying as biphasic breast tumour and the infiltrative margin and cellularity as well as a few mitosis makes me worried. Low grade periductal stromal sarcoma (CD34+) is in top of my differential recognizing the problems in delineating this from PT borderline. Semantics… Mammary NOS-type sarcoma Leibl recently suggested in literature with more aggressive look but possibly in same direction. This case I would check margins and make sure is completely excised – close margin noted. You like imaging (me to but I often don't find time to review – trying to teach our 27 residents to do it…) I like immunos and molecular so off course I would look for additional markers such as bcl2 & CD 99 (SFT), CD10, ER & PGR (biphasic tumours/PT), myoepithelial markers and ALK (IMT) and MIB1. In my sections I see a very peculiar and impressive spherulosis possibly as a sign of increased myoepithelial activity not necessarily of importance in classifying the lesion.

Franco Fedeli: Solitary fibrous tumour of breast. Agree. No different suggestion or view on my part.

Christopher Fletcher: To me, this lesion looks most like an unusual fibroepithelial neoplasm, albeit not any usual phyllodes tumor. I do not think that the appearances fit so well with solitary fibrous tumor and, furthermore, I would not expect the latter to entrap epithelial structures as in this case. I agree that the lesion appears benign. It does not fit neatly with any defined 'soft tissue' entity in my opinion.

Jeronima Forteza: I agree with the diagnosis of solitary fibrous tumor. It is a morphological exclusion diagnosis, and it is also based on the positivity for CD34.

Giovanni Falconieri: Nice case, Ira. Your case differs somewhat from those in the miniseries reported a few years ago in the Annals of Diagnostic Pathology since it shows a more pronounced periductal fibrosis. I would probably stay just one step behind regarding this as stromal tumor, NOS, benign, likely arising from the specialized periductal fibroblast, but I would defer and wait for the soft tissue expert opinion.

Thomas Krausz: SFT is possible, though I am not sure either. Focal entrapment of epithelial structures is not rare in cases where SFT involves the lung parenchyma, however in the submitted case the acinar/ductal structures are distributed throughout the lesion. I agree that this is not right for phyllodes, though I was considering periductal stromal tumor of Tavassoli. CD34 is usually positive in epithelial-stromal tumors of the breast and even in the specialized normal lobular mammary stroma.

Janez Lamovec: I must say that I am not particularly happy with a diagnosis of SFT in this case. Although there is a lack of subepithelial stromal condensation, some focal concentric condensation of stromal cells around hyalinized stromal »collar« encircling some ducts is present. The epithelial component may or may not be only entrapped ducts. In short, I would prefer to call this lesion an unusual cellular stromal tumor perhaps related to PT or periductal stromal tumor. In my experience, the grey zone between different fibroepithelial tumors is quite wide and often it is difficult to categorize an individual tumor into any of the known group. An interesting feature of this case is a peculiar accumulation of hyalinized collagen around lobular structures at the periphery of the lesion somewhat reminiscent of collagenous spherulosis although admittedly not spherical.

Hugo Dominquez Malagon: Interesting case; probably belongs to the group of "dendritic CD34+ cell proliferations" including spindle cell lipoma, myofibroblastoma, solitary fibrous tumor. I think it's benign.

Michal Michal: The stroma does not seem to me as that of solitary fibrous tumor. It seems that it fits well with the diagnosis of "*Periductal stromal tumor*" *A.M.Burga, F.A.Tavassoli. Am J Surg Pathol 2003:27:343-348*

Markku Miettinen: Would agree on intraparenchymal solitary fibrous tumor. Have seen similar ones in salivary gland.

Liz Montgomery: This seems a fully benign "cousin" of Tanya Tavassoli's "periductal stromal tumor" rather than an SFT to me.

Cesar Moran: I initially thought this case represented myofibroblastoma. I am not sure what to do with the positive CD34 but just recently saw a case of a carcinoid tumor with overwhelming positive staining for CD34 and also for Bcl-2. I do not favor SFT in this case.

Dominic Spagnolo: I'm not sure what to call this. I think a benign phyllodes tumour is still likely. I also considered a cellular form of gynecomastia-like hyperplasia of the breast, but the stromal overgrowth really seems excessive.

Saul Suster: I would rather call this descriptively a benign periductal stromal tumor rather than SFT. SFT should grow as a discrete expansile mass rather than as a diffuse periductal proliferation. CD34 positivity ceased to be a specific marker for SFT several years ago, and I would not use that as a surrogate for making that diagnosis.

Ady Yosepovich: Ira, you were right on the core needle biopsy (you showed it in your slide seminar at Sheba). I also think it is not phylodes (imaging doesn't fit) and the morphology is not of fibromatosis. Rare location, correct diagnosis. Thank you for sharing this outstanding case.

CASE NO. 7 – CONTRIBUTED BY KUM COOPER

Abbas Agaimy: Nice case of Küttner tumor. I also would not rely much on the IgG4+ cells but the IgG4-IgG-ratio might be more helpful in some cases.

Phil Allen: Chronic sclerosing sialadenitis, left submandibular salivary gland. I was relieved to see that Kum has not sold this slice of bread and butter pathology as an IgG 4 rarity. There are polymorphs within some of the ducts. I hope the surgeon and the radiologists did not miss a stone along with the diagnosis.

Carlos Bacchi: Nice and classical example of Kuttner's tumor.

David Ben-Dor: The parenchyma looks pretty washed out. Were you disappointed that the IgG4 didn't pan out?

Michele Bisceglia: Chronic sclerosing sialadenitis (Kuttner's tumour). Typical case. Thank you, Kum.

Ira Bleiweiss: Agree. Hope this wasn't a frozen - it could have been very tricky.

Thomas Colby: Nice Kuttner tumor. I think when they get this fibrotic they may not necessarily have the required numbers of IgG4-positive plasma cells to confirm a diagnosis of IgG4-related disease. Nevertheless, the changes here are sufficiently nonspecific that I am not sure all cases are necessarily associated with IgG4-related disease.

Kum Cooper: My case.

Otto Dietze: In my opinion a classical example of Kuettner's tumor.

Goran Elmberger: This might be an inactive case of chronic sclerosing sialadenitis (Kuttner tumour) but I find the classification of the chronic sialadenitides often difficult to apply. In the differential we have to consider not only autoimmune sialadenitis with LEL and IgG increment but also chronic sialadenitis NOS/obstructive/silalolithiasis-associated forms. I believe we may be better served to define the chronic sclerosing sialoadenitis as IgG4 associated since in broad essence all chronic sialadenitides are sclerosing. If defined that way I am not sure I would include the present case in the entity. Lack of IgG4 expressing plasma cells (> 50/HPF), lack of obvious obstructive endophlebitis and a rather low cellular fibrous stroma is not typical of an active IgG4 sclerosing disease. Does the patient suffer from other IgG4 sclerosing diseases? Serum elevation of IgG4? Elastin van Giesson to highlight any phlebitis recommended. Epidemiology and symptoms also rather typical for chronic obstructive-sialolithiasis associated forms including relation of symptoms to meals. I do see one small sialolith in my section and inflammation is ductocentric and often granulocytic. NOS is also an alternative.

Franco Fedeli: Chronic sclerosing sialadenitis. A typical case which demonstrates that not every Kuttner's tumour is strictly IgG4-related.

Cyril Fisher: Kuttner tumor, very nice example.

Christopher Fletcher: I thought that chronic sclerosing sialadenitis (Kuttner tumour) was nowadays thought to be a form of IgG4 sclerosing disease but I do not see the obliterative phlebitis and more prominent plasma cells that one might expect in that context. Can we be sure that this is not simply end-stage chronic sialadenitis?

Jeronimo Forteza: I agree with the diagnosis of chronic sclerosis sialoadenitis. It belongs to the spectrum of an autoimmune disease. It shows a morphological correlation of lymphoplasmacytic infiltration.

Giovanni Falconieri: Great educative case, Kum. I agree, of course.

Thomas Krausz: Beautiful example.

Janez Lamovec: Nice case of Kuttner's tumor.

Hugo Dominquez Malagon: Classical case of Kuttner's tumor, how about minor salivary gland involvement in IgG4 lymphoplasmacytic sclerosing disease? No information is available yet on Sicca syndrome.

Markku Miettinen: Agree on chronic sialadenitis with glandular atrophy.

Liz Montgomery: Thanks for this delightful classic example of chronic sclerosing sialadenitis.

Cesar Moran: Nice case.

Dominic Spagnolo: Agree the features are compatible with chronic sclerosing sialadenitis. The history of recurring pain and swelling with eating necessitates exclusion of calculous obstruction but I imagine this has been done. I have seen a few cases that are otherwise typical of a Kuttner tumour but the IgG/IgG4 stains are not supportive, but these can vary during the course of the disease. Thanks for the case Kum.

Ady Yosepovich: Very nice case.

CASE NO. 8 – CONTRIBUTED BY IVAN DAMJANOV

Abbas Agaimy: Very nice case illustrating a rare lesion. I have never seen it before at this location.

Phil Allen: Mesenteritis ossificans, small bowel mesentery. I saw one of these in consultation about six months ago. No doubt Juan has seen many more since his 1999 article. Perhaps he has even seen a true mesenteric osteosarcoma. Thanks for the contribution.

Carlos Bacchi: Another "bone metaplasia case"! Great example of mesenteritis ossificans.

David Ben-Dor: We're seeing a lot of ossification in unusual locations in this seminar! Does the patient at the end have an underlying Crohn's disease? And if so, are these changes secondary to it or to the previous surgery?

Michele Bisceglia: Heterotopic mesenteric ossification. Yes, agree. This reminds us of the other types of (usually) post-traumatic ossifications we can see in a variety of other tissues and sites. This is a rare site of occurrence. Maybe have seen 1-2 (personal) cases of such an entity.

Ira Bleiweiss: Fat necrosis with bone formation, but I like your name better.

Thomas Colby: Agree with diagnosis. In this case some of the regions histologically appear to overlap with retractile enteritis. Heterotopic mesenteric ossification apparently is frequently associated with prior surgery which appears to be the case in this patient.

Kum Cooper: Certainly looks like myositis ossificans. Did you rule out desmoid fibromatosis with beta-catenin?

Otto Dietze: I know this only from the literature, I did not see a case before.

Goran Elmberger: New to me and very useful. Thanks!

Franco Fedeli: Heterotopic mesenteric ossification. Definitely this tumour is related to the same pathogenetic process of other similar lesions encountered in other places. Intraabdominal panniculitis ossificans would be another appropriate term to refer to this process.

Cyril Fisher: Heterotopic mesenteric ossification, very nice slide

Christopher Fletcher: Heterotopic mesenteric ossification – which seems to have arisen in the context of extensive fat necrosis, scarring and xanthomatous inflammation, likely related to prior visceral perforation. An impressive case!

Jeronima Forteza: I agree with the diagnosis of heterotopic mesenteric ossification (HMO). I would like to rule out a vascular pathology with reduction of vessel lume.

Giovanni Falconieri: Never seen before (and again, if seen not recognized!). Thanks for his valuable contribution.

Thomas Krausz: Great example.

Janez Lamovec: To me this appeared as an ossifying fat necrosis. Never heard (or heard and forgotten) of the entity.

Hugo Dominquez Malagon: Interesting case of Mesenteritis ossificans. It obviously is an excessive reparative response (probably related to fat necrosis or hemorrhage), it probably belongs to the nodular fasciitis group of myofibroblastic proliferations that often display osseous metaplasia.

Markku Miettinen: Agree on heterotopic ossification "myositis ossificans-like".

Liz Montgomery: Beautiful case of a mesenteric myositis ossificans-like tumor.

Cesar Moran: Bone again, now I am sure we have an epidemic with lung and GI.

Dominic Spagnolo: Beautiful case of heterotopic mesenteric ossification. I have not personally encountered this. Thanks.

Ady Yosepovich: Extraordinary case; thank you for sharing.

CASE NO. 9 – CONTRIBUTED BY OTTO DIETZE

Abbas Agaimy: Very interesting and quite uncommon lesion, could be also called polypoid endomteriosis or even "endometrioma", actually. A small endoscopic biopsy from the most crowded glandular areas would be would be quite misleading. One more reason for cautiousness when interpreting GI biopsies.

Phil Allen: Polypoid endometriosis in the transverse colon. There are thousands of active endometrial glands with accompanying stroma but where is the chocolate icing on the cake?

Carlos Bacchi: Fantastic case of florid including polypoid growth of endometriosis involving the colon.

David Ben-Dor: Of course this would be totally unremarkable in the uterus but in the colon it isn't necessarily obvious.

Michele Bisceglia: Endometriosis of the colon with polypoid growth pattern. Have seen a few cases of colonic localization of endometriosis, including 2 cases of endometriosis of the appendix. None of these showed the polypoid gross features like in your case.

Ira Bleiweiss: Wow. Agree.

Thomas Colby: Agree with diagnosis. A very dramatic example.

Kum Cooper: Polypoid endometriosis (is what Dr Robin Young called this).

Goran Elmberger: Impressive. Thanks. I don't quite understand that disease.

Franco Fedeli: Endometriosis of the colon. Definitely the colon is the most frequent site of occurrence of visceral endometriosis but have never seen this polypoid form as seen in your case. This implies that the diagnosis in this case could have been made on endoscopic biopsy before surgery.

Cyril Fisher: Fantastic appearance of endometriosis forming colonic polyp.

Christopher Fletcher: Very impressive example of polypoid endometriosis – I am in no way a GYN expert but it is my subjective impression that large polypoid lesions such as this are more often seen in the ovary or adnexal structures.

Jeronima Forteza: I agree with the diagnosis (endometriosis of the colon) .

Giovanni Falconieri: Impressive endometriosis, thanks for this extreme case! Never seen before as well.

Thomas Krausz: Superb case. The adjacent colonic mucosa shows hyperplastic/goblet cell-rich changes, similar to those seen in association with colon carcinoma.

Janez Lamovec: To me this appears to be a spectacular case of polypoid endometriosis of colon. Thank you.

Hugo Dominquez Malagon: Amazing case, it looks like a true endometrial polyp in colonic endometriosis.

Markku Miettinen: Florid, mildly atypical intestinal endometriosis.

Liz Montgomery: What a dramatic presentation of endometriosis as a giant (presumably obstructing) colon polyp. Looks secretory.

Cesar Moran: Interesting case.

Dominic Spagnolo: I disagree that this is nothing exciting! It is a very photogenic and uncommon polypoid endometriosis of the colon. Thanks for the case.

Saul Suster: Never seen anything like this before – far from being a "not exciting case". Cases of endometriosis that I've seen previously usually are small, spotty, and accompanied by inflammatory and reactive changes including bleeding and hemosiderin laden macrophages. This one is clean and actually looks more like a normal uterus is growing in the wall of the bowel! Could this be an instance of ectopic endometrium originating in the wall of the bowel rather than true "endometriosis"?

Ady Yosepovich: Very nice case, thank you.

CASE NO. 10 – CONTRIBUTED BY HUGO DOMINQUEZ MALAGON

Abbas Agaimy: Nice teaching case, I would expect CD34 to be lost in the differentiated component.

Phil Allen: Malignant (dedifferentiated) solitary fibrous tumor, right (?parietal) pleura. At least this solitary fibrous tumor is confined within the right area, even if his cell of origin is debatable.

Carlos Bacchi: Great case, great documentation of dedifferentiated SFT.

David Ben-Dor: The contrast between the very hypocellular and densely collagenized original tumor and it's highly cellular and aggressive looking offshoot is striking.

Michele Bisceglia: Dedifferentiated solitary fibrous tumour of pleura. Very convincing case. Incidentally the first , et al. Solitary fibrous tumour of the Magro Gdedifferentiated case of SFT (I think) was reported in the kidney (2008;116:1020-5).APMIS.kidney with sarcomatous overgrowth. Case report and review of the literature.

Ira Bleiweiss: Agree and malignant for sure.

Thomas Colby: I would simply call this a solitary fibrous tumor with cellular areas c/w malignancy. I have not thought of these small cell areas as indicative of dedifferentiation since they are not an uncommon finding.

Kum Cooper: Nice Hugo. Dediff SFT. I have been waiting for one of these since Dr Fletcher described them.

Otto Dietze: EM to my opinion highlights the dendritic morphology and I agree with your interpretation.

Goran Elmberger: Great case!

Franco Fedeli: Dedifferentiated solitary fibrous tumour of pleura. Dedifferentiation is well shown in this slide. The list of dedifferentiated tumours (both mesenchymal and epithelial tumours) has been progressively enlarging during the years (first example of the list being dedifferentiated chondrosarcoma reported by Dahlin, Cancer 1971): dedifferentiated SFT is likely the last one in the list at the moment.

Cyril Fisher: Convincing example of SFT with undifferentiated areas that can be termed equivalent to dedifferentiation in other tumour. Nice gross picture.

Christopher Fletcher: Certainly seems like a nice example of dedifferentiated SFT – the kind remarks are much appreciated.

Jeronima Forteza: I agree with the diagnosis: dedifferentiated solitary fibrous tumor. Case with good immunohistochemistry and ultra-structural study that support the histological diagnosis.

Giovanni Falconieri: Difficult case, Hugo. I must admit lack of experience with the subject. The pictures that you provided showed convincing abrupt transition from classic SFT to more cellular, sarcomatous areas. Thanks for this valuable contribution.

Thomas Krausz: Agree with diagnosis. This can be a diagnostic challenge if only the dedifferentiated component is sampled on needle biopsy. I agree with your "CD34 dendritic" idea.

Janez Lamovec: On H&E, the dedifferentiated component reminds me of cellular variant of myxoid chondrosarcoma.

Michal Michal: Undifferentiated sarcoma.

Markku Miettinen: Agree on solitary fibrous tumor with histologically malignant transformation, mitoses >10/10 HPFs.

Liz Montgomery: A beautiful example of a clearly malignant component and a juxtaposed sclerosed blander component of an SFT. The gross is spectacular.

Cesar Moran: Spectacular case. I have seen a few of these cases. Always difficult in small biopsies.

Dominic Spagnolo: Agree dedifferentiated SFT. Were any neuroendocrine markers looked at, and FISH for EWS? The EM images remind me of extra skeletal myxoid chondrosarcoma cases I have seen. Very nice case – thank you.

Saul Suster: Agree – nice example of solitary fibrous tumor with high-grade sarcomatous component. We have seen several examples in the pleura and mediastinum.

Ady Yosepovich: Very nice case.

CASE NO. 11 – CONTRIBUTED BY VINCENZO EUSEBI

Abbas Agaimy: Thank you for sharing this interesting case.

Phil Allen: Medullary carcinoma with lymphoid infiltrate, right breast. I apologise for my dinosaurian nomenclature but I can not accept any carcinoma as being similar to nasopharyngeal lymphoepithelial carcinoma of the type seen in southern China unless the EBER in situ hybridisation stain is unequivocally positive. To my eye, the H and E stain

of this tumor does not look the same as a Chinese nasopharyngeal carcinoma. I would however be prepared to submit my opinion to judgement by the Eskimos.

Carlos Bacchi: I would have a hard time not calling this medullary-type ductal carcinoma. Thanks for teaching how to differentiate lymphoepithelioma-like carcinoma of the breast from medullary carcinoma.

David Ben-Dor: The arrangement of the lamellated collagen fibers gives the slide a storiform or herringbone aspect on low power examination.

Michele Bisceglia: Lymphoepithelioma-like carcinoma of breast. This tumour type has been reported in many locations other than the prototypical rhinopharyngeal one, such as salivary glands, skin, thymus, soft palate, trachea, lung, stomach, pancreas, renal pelvis and bladder, endometrium and uterine cervix, and breast (and maybe in other sites as well). To the best of my knowledge the first 2 published cases of this tumour type are the one by Kumar S and Kumar D (Mod Pathol 1994; 7:129-131) and the one by Cristina S et al (Virchows Arch 2000; 437:198-202): also in those cases no EBV genome was found after being molecularly searched for.

Ira Bleiweiss: Agree. I've never seen a case before. Thanks, Vincenzo.

Thomas Colby: Agree with diagnosis of lymphoepithelioma-like carcinoma although without a little prompting I might have been considered medullary carcinoma of the breast but as has been pointed out medullary carcinoma is very strictly defined by its relative circumscription.

Kum Cooper: NPC-like carcinoma or FDC sarcoma. CD21/35?

Otto Dietze: I cannot remember a case of this tumor in the breast.

Goran Elmberger: Great case. In H&N we don't use the term lymphoepithelioma any longer. At least not in the epipharynx, the typical site for the tumour. We now call them epipharyngeal non-keratinizing undifferentiated carcinomas. Interesting development in nomenclature… I believe this case has great resemblance to those tumours in the head and neck, and as those most commonly do show admixed areas of Rigaud and Schmincke morphology.

Franco Fedeli: Lymphoepithelioma-like carcinoma of breast. Nice case. I suspect that the most difficult differential diagnostic consideration is represented by the atypical variant of medullary carcinoma. Maybe some examples of this tumour have been (and still are) are misdiagnosed as such.

Cyril Fisher: Metastasizing lymphoepithelial carcinoma of breast, agree.

Christopher Fletcher: Very convincing example of lymphoepithelioma-like carcinoma arising in the breast – I have not personally seen this before.

Jeronima Forteza: I agree with the diagnosis of lymphoepithelioma-like carcinoma. Both the morphology and the immunohistochemistry support a differentiated diagnosis from breast medullary carcinoma. I have not seen before a lumphoepithelioma-like carcinoma case on this location. Thanks for this case.

Giovanni Falconieri: Great case, Vincenzo. Obviously I agree with your assessment. Yet, since I am not too much familial with this relatively new entity, my basic instinct would diverge me from the right track and bring me to consider atypical medullary carcinoma.

Thomas Krausz: I agree; it looks like the nasopharyngeal ones.

Janez Lamovec: I have problems to separate such tumors from atypical medullary carcinoma although the infiltrating features of this tumor are perhaps too much developed for the former one. I am not sure if immuno is of much help in such cases.

Hugo Dominquez Malagon: Agree with LELC, it seems to be a phenotype shared by carcinomas in many organs included lung, thymus, GI tract, thyroid, and cervix. The ones arising in upper and lower respiratory tract are associated with EBV, the ones below the diaphragm are not.

Markku Miettinen: Agree; nice lymphoepithelioma-like carcinoma. Scant epithelial element.

Liz Montgomery: Thanks for sharing this breast cancer with lymphoepithleial/medullary-type features. I am very confused on what makes a tumor lympho-epithelial versus medullary. In the colon and pancreas we use the word "medullary" to indicate something with mismatch repair defects but in the esophagus and stomach, we use the word "lymphoepithelial" for a very similar pattern and associate with EBV. In the stomach and esophagus MSI-hi is very infrequent.

Cesar Moran: Very interesting case.

Dominic Spagnolo: Very nice lymphoepithelioma-like carcinoma of the breast. Have not encountered this before. Thank you.

Saul Suster: Agree that the morphology is good for lymphoepithelioma-like carcinoma similar to the nasopharyngeal type. The uniformity of the nuclei and paucity of nuclear pleomorphism and hyperchromasia would stand in contrast with medullary carcinoma, with which this is likely to be confused. Lymphoepithelial carcinomas outside of the nasopharynx (and especially in non-Oriental patients) are often EBV-negative. That has certainly been our experience with the tumors originating from the thymus.

Ady Yosepovich: A very rare histological subtype of invasive breast cancer. Very nice and challenging case. Thank you for sharing.

CASE NO. 12 - CONTRIBUTED BY CYRIL FISHER

Abbas Agaimy: Fascinating case, have never seen before, thank you.

Phil Allen: Ulcerated, epithelioid inflammatory myofibroblastic sarcoma, caecal wall. Thanks for this case Cyril. It is the first one I have had shown to me. Goodness knows how many I have missed in the past.

Carlos Bacchi: I just had a case very similar to the morphological findings found in this case, i.e.; mitotically active atypical epithelioid cells with chronically inflamed myxoid stroma with scattered spindle cells. My case was a myofibroblastic tumor-like dedifferentiated liposarcoma. The message here is that ALK should be performed in this case in order to rule out epithelioid inflammatory myofibroblastic sarcoma.

David Ben-Dor: Has much less of a chronic inflammatory infiltrate than usually seen in the classical variant.

Michele Bisceglia: Epithelioid inflammatory myofibroblastic sarcoma. Very interesting case. I was not aware of this new tumour variant in the spectrum of inflammatory myofibroblastic tumours.

Ira Bleiweiss: ??

Thomas Colby: Agree with diagnosis. Lovely case.

Kum Cooper: "Sick" Cyril! ☐ Been waiting for one of these since Jason and Chris' paper!

Goran Elmberger: Interesting case. Good morphological- IHC-molecular correlation. Any response with ALK inhibitors?

Franco Fedeli: Epithelioid inflammatory myofibroblastic sarcoma. Agree, still a very difficult diagnosis if someone is not aware of this new variant in the spectrum of inflammatory myofibroblastic tumours.

Christopher Fletcher: Very convincing example of epithelioid inflammatory myofibroblastic sarcoma – remarkably, this subset of IMT seems to be especially aggressive.

Jeronima Forteza: This case confirms the importance of using FISH for diagnosis in surgical pathology. The positive ALK confirms a myofibroblastic tumor.

Giovanni Falconieri: Another impossible case to comment on. Very difficult. Thank you for contributing this collectible slide.

Thomas Krausz: This entity is new to me. Cyril, thank you very much.

Janez Lamovec: This is really a very epithelioid tumor, I thought of some type of sarcomatoid carcinoma although the age of the patient and diffuse inflammation without necrosis didn't fit into the picture. Most interesting case.

Hugo Dominquez Malagon: Inflammatory myofibroblastic sarcoma with plump myofibroblasts (ample basophilic cytoplasm probably containing RER cysternae), if somebody want to call them "epithelioid" it's OK.

Markku Miettinen: Agree on inflammatory myofibroblastic tumor. It has spindled and epithelioid morphology.

Liz Montgomery: Cyril, This is stunning, especially knowing you have lovely IHC and molecular confirmation.

Cesar Moran: Very nice case.

Dominic Spagnolo: Spectacular case of epithelioid inflammatory myofibroblastic sarcoma Cyril. Thanks.

Saul Suster: Thank you for contributing this case to the club! I'm sure I've seen cases like this before and have called them "inflammatory MFH".

Ady Yosepovich: Never saw one before, a fantastic case and diagnosis.

CASE NO. 13 - CONTRIBUTED BY CHRISTOPHER FLETCHER

Abbas Agaimy: Very unusual and interesting case. I have been collecting fibroinflammatory IgG4-related lesions and have seen quite funny phenomena. I think this case looks somewhat like periaortitis related to IgG4-disease. I have seen recently one case causing inflammatory aortic aneurysm. This might represent the gross counterpart of the microscopic obliterative angiitis well known to characterize this emerging disease. I would suggest estimating the serum IgG4 level in such cases and looking for further organ manifestations on imaging. Thank you Dr. Fletcher for contributing this very nice slide.

Phil Allen: Undiagnosed sclerosing fibroinflammatory lesion encasing the carotid artery. I assume there is no history of a sclerosing agent being introduced into this general area in the distant past. I also wondered about a sclerosed inflammatory myofibroblastic tumor, now that IgG4 disease has been excluded. I wonder if the real retroperitoneal fibrosis will ever stand up to be identified. Most of my cases of retroperitoneal fibrosis eventually proved to be sclerosing lymphomas.

Carlos Bacchi: Myofibroblastic proliferation with chronic inflammation and sclerosis of the stroma of unknow biological behavior.

David Ben-Dor: As also shown in Kum's case, despite the advent of the IgG4 concept the generic appellation "plasma cell granuloma" hasn't run its course (at least as of yet).

Michele Bisceglia: Sclerosing fibroinflammatory lesion. ? type. No better specific name to suggest. The one you called it is fine.

Ira Bleiweiss: I don't know what to call this, but whatever this is, it's a nightmare.

Thomas Colby: Well, it is a dramatic example of something! Where are all those IgG4-positive plasma cells when we need them? Perhaps someone will have a bright idea.

Kum Cooper: Also considered IgG4 lymphoplasmacytic sclerosing disease. Seems to be akin to the so-called aortic abdominal inflammatory aneurysm. The Japanese contend that the latter is IgG4 linked! Curious to read JKC's comments.

Otto Dietze: I cannot offer another diagnosis. I believe that I have seen a similar lesion in ENT pathology at the basis of the skull.

Goran Elmberger: My first impression was IgG4 sclerosing disease based on fibrosis, obliterative endophlebitis and reactive looking follicles. Agree with your discussion but have no own specific diagnosis. IgG4 in serum? Other organ manifestations? IgG4 sclerosing disease in quiescent phase? We know little of the temporal aspects of IgG4 sclerosing disease if it indeed is a disease rather that a pathogenetic inflammatory pattern.

Franco Fedeli: Sclerosing fibroinflammatory lesion. Very unusual pattern of growth. Agree on the name given.

Cyril Fisher: I agree this most likely belongs to the expanding group of inflammatory sclerosing conditions though IgG4 negative, though more than the usual lymphocytic phlebitis seen in some cases.

Jeronima Forteza: I ignore to what extent the perivascular inflammatory infiltration supports the autoimmune nature of fibrosis. It can point towards fibrosis' nature, although *stricto sensu* it is a vasculitic process.

Giovanni Falconieri: Difficult case, Chris. No way I may come up to the right interpretation, being oriented toward a myofibroblastic tumor.

Thomas Krausz: I agree, histologically this looks like some examples of retroperitoneal fibrosis.

Janez Lamovec: Most unusual fibrosclerotic vasculocentric inflammatory lesion with endoangitic changes.

Hugo Dominquez Malagon: Possibly belongs to the group of inflammatory myofibroblastic (psedo) tumors. It affects the artery and the perivascular tissue.

Markku Miettinen: Agree on fibrosclerosing disease surrounding a large vessel (? Carotid artery). The vessel is so mutilated cannot be sure if artery (elastic stain could be of interest). Phlebitis has been reported as a common component is retroperitoneal fibrosis, to which this is most certainly related.

Liz Montgomery: Indeed looks like IgG4-related sclerosing disease and certainly there is a precedent for IgG4 disease damaging vessels, but of course they are usually veins. Assume you also tried an S100 on it in case it was a peculiar sclerotic example of Rosai-Dorfman disease and an ALK.

Cesar Moran: Thought about some sore of vasculitis but not so sure.

Dominic Spagnolo: I don't have anything specific to offer. It is certainly unusual. Presumably serum IgG and IgG4 levels have also been looked at, and there is no good evidence for any underlying autoimmune disease. Perhaps it is a genuinely "idiopathic" cervical fibrosis/inflammatory pseudotumour.

Saul Suster: Don't have a better name for this than yours. I've seen a few similar cases in superficial soft tissues over the years for which I also had no explanation to offer. All showed similar features, sclerosis, inflammation, entrapment of large nerve trunks, proximity to large vessels, well-formed lymphoid follicles and plenty of IgG4-negative plasma cells. One case showed a local recurrence after excision!

CASE NO. 14- CONTRIBUTED BY ANDREW FOLPE

Abbas Agaimy: Very interesting case, earlier reports on pigmented uterine PEComas might have represented similar lesions. Never seen such a case before. Thank you Dr. Folpe.

Phil Allen: Primary ovarian melanotic Xp-11 translocation neoplasm of renal type. I accept Andrew' s brilliant diagnosis. I don't think I have ever seen a similar case.

Carlos Bacchi: I also thought this was going to be a PEComa. Great case with nice discussion. I don't remember seeing such a case either in the kidney or outside. If I did, I probably called it PEComa.

David Ben-Dor: There is some brown pigment in the neoplastic cells but in places at least it's subtle and not obvious and may require some degree of perspicacity on the part of the examiner to notice it- chance rewards the prepared observer! The question also is what else could appear in the ovary of a teen-ager and look like this?

Michele Bisceglia: Melanotic translocation Xp11-related neoplasm of renal type, primary to the ovary. Never seen one in extrarenal location.

Ira Bleiweiss: Never heard of it.

Thomas Colby: I cannot make any intelligent comments about this case that I have only vaguely heard of before.

Kum Cooper: Wow! I thought that this was an epithelioid melanotic schwannoma. Fascinating Andrew. Thank you.

Otto Dietze: I don't know a similar case and have even not seen this in the kidney.

Goran Elmberger: Very difficult case. I can't offer any better diagnosis than the one suggested by Andrew and to me there is good morphological resemblance to illustrations in Argani paper on melanotic Xp11 translocation renal " cancer". Maybe it is as Andrew states that a tumour of presented phenotype should not lightly be assigned to the carcinoma category in absence of all epithelial markers and the lack of previously described cases with follow up in the ovary. In the presented case it is hard to know if we really are dealing with an ovarian tumour proper or if the tumour could possibly be derived from hilar rests some of them embryologically closely related to adrenal glands or even kidney structures… Furthermore, I believe characterizing the gene rearrangement beyond split apart (?) FISH to characterize also fusion partner should be done in a unique case as this. Many different gene fusions have been identified with different corresponding tumours. Could this be an atypical example ASPS (ASPL-TFE3)??

Franco Fedeli: Melanotic translocation Xp11-related neoplasm of renal type, primary to the ovary. The first one I see. Very interesting the possible relationship between this tumor and PEComas.

Cyril Fisher: Incredible case. The argument seems plausible. Lack of myoid antigens also argues against PEComa.

Christopher Fletcher: Although there is only very little viable tumour in the section which I received, this tumor does indeed closely resemble the Xp11-related translocation carcinoma of renal type. I can vaguely recollect seeing perhaps two similar cases outside the kidney – but when I sent both of these to Pete Argani, he was not convinced. The relationship of such lesions to PEComa seems confusing but may, in due course, be resolved by more detailed molecular analysis.

Jeronima Forteza: Difficult diagnosis, based on FISH negative for EWSR1 and positive TFE

Giovanni Falconieri: Out of my reach, Andrew. Cannot offer any decent comment. Thanks for this extraordinary contribution.

Thomas Krausz: Intriguing case. I would suggest to the clinicians/radiologists to re-look the images just to make sure that there is nothing in the kidneys. I also have a conceptual problem with Xp11 kidney "carcinomas" in view of cytoplasmic melanin and negative keratin.

Janez Lamovec: Clear cell melanotic tumor. I am not aware of the entity.

Hugo Dominquez Malagon: Extraordinary case of extra-renal melanotic Xp11 translocation tumor, I have no experience with these neoplasms.

Michal Michal: Amazing case. I would never expect to find the tumor in the ovary.

Markku Miettinen: Xp11-related neoplasm/carcinoma is a reasonable interpretation. Perhaps these tumors are related to PEComas, which can also have TFE3, perhaps also TFE3 rearrangements? Estrogen receptor IHC would also be of interest.

Liz Montgomery: Goodness Andrew, you are really good at recognizing elephants in trees. I guess there is no reason a neoplasm identical to the Xp11-related typically found in the kidney could not manifest in another organ in the genital tract but of course have no experience.

Cesar Moran: Very instructive case. Not seen one of those before.

Dominic Spagnolo: The argument seems compelling that this is analogous to the melanotic Xp11 renal neoplasms. I am assuming the tumour was MiTF negative? Wonderful case!

Saul Suster: Never seen a case of Xp11 melanotic neoplasm in the kidney or elsewhere. Congratulations, Andrew, on the very sharp diagnosis.

CASE NO. 15 - CONTRIBUTED BY JERONIMO FORTEZA-VILA

Abbas Agaimy: Very interesting case and a further nice documentation of the phenomenon of histiocytic/dendritic cell neoplasms following other malignancies. The section I have received was unfortunately very pale to allow for recognition of cellular features. It would be interesting to look for CD163 staining.

Phil Allen Probable clear cell sarcoma of tendons and aponeuroses, soft tissues, T4 region with metastases in T5 and T9 vertebrae. I doubt that this is a histiocytic sarcoma, dendritic cell tumor or a metastatic melanoma.

Carlos Bacchi: Hard to diagnose without an extensive panel of immunohistochemistry markers.

David Ben-Dor: Brilliant diagnosis. I would have assumed it to be carcinoma unless proven otherwise. What about the other histiocytic marker (CD163?); shouldn't CD23 be positive if it were a dendritic cell tumor?

Michele Bisceglia: Histiocytic sarcoma/dendritic cell tumor. Nice example of histiocytic sarcoma (Pileri SA, et al. Histopathology 2002; 41:1-29).

Thomas Colby: Don't know. With the history I would have wondered about metastatic dedifferentiated chondrosarcoma.

Kum Cooper: IHC conclusively proves FDC sarcoma.

Otto Dietze: In my opinion typical morphology and compatible IHC.

Goran Elmberger: This is a poorly differentiated tumor hard to classify. I guess you could be right from morphological and immunophenotyping perspective but the clinical situation would make me wonder about metastases from dedifferentiated chondrosarcoma. Correlative genotyping SNP/CGH on chondrosarcoma and presented tumor?

Franco Fedeli: Histiocytic sarcoma/dendritic cell tumor. The histology is highly suggestive for histiocytic sarcoma.

Cyril Fisher: Given the immunohistochemistry, this seems a good diagnosis of histiocytic sarcoma.

Christopher Fletcher: On morphologic grounds, this tumor could indeed fit well with histiocytic sarcoma, although the focally more spindled morphology is somewhat unusual. It would be interesting to know the results of staining for CD4 and CD163.

Giovanni Falconieri: I find this spectrum of tumors very difficult to assess. Thanks for this contribution**.**

Thomas Krausz: I have difficulty in classifying precisely this histiocytic neoplasm.

Janez Lamovec: This is a very difficult lesion on H&E and probably very tough to get to diagnosis without immuno. I thought of different possibilities but not of the correct one.

Hugo Dominquez Malagon: Histiocytic sarcoma, nice case.

Markku Miettinen: Very difficult case. CD163 would be of interest for histiocytic differentiation ? Hematopoietic sarcoma of uncertain lineage.

Liz Montgomery: Looks like some sort of dendritic cell tumor (interdigitating).

Cesar Moran: Interesting case. How often do you see all stains negative in this tumor?

Dominic Spagnolo: Histiocytic sarcoma seems OK with me. Thanks.

Saul Suster: The slide was too lightly stained for proper assessment but I think the nuclear morphology is compatible with a dendritic cell tumor. The negative markers, however, are disturbing and suggest that additional inquiry would be indicated before rendering any diagnosis on this case.

CASE NO. 16 - CONTRIBUTED BY JANEZ LAMOVEC:

Abbas Agaimy: Nice case. Are the prominent veins an integral part of the lesion?

Phil Allen: I have seen one aggressive mediastinal and pulmonary lymphangiomatosis in an adult but never one like this. I would be a bit worried about the possible long-term effects of the radiotherapy given to the lower abdominal wall, left labial and left gluteal regions five years ago.

Carlos Bacchi: I agree with the interpretation that this is probably a lymphangioma/lymphangiomatosis. Thanks for sharing such unusual case.

David Ben-Dor: I agree that the pathology looks fairly straightforward whereas the clinical aspect is challenging.

Michele Bisceglia: Very interesting clinicopathological case. I would suggest to go through this paper and see if it fits in one of the entities listed therein (Radhakrishnan K, Rockson SG. The clinical spectrum of lymphatic disease. Ann N Y Acad Sci. 2008;1131:155-84). Additionally, recently, Sildenafil was found to cause marked regression of large lymphatic malformations, a therapeutic modality that may prove to be promising (Swetman GL, et al. Sildenafil for severe lymphatic malformations. N Engl J Med. 2012;366:384-6).

Ira Bleiweiss: Agree with lymphangioma.

Thomas Colby: Agree with diagnosis. For the past several years I have been involved with the lymphangiomatosis foundation (lymphangiomatosis.org) and have seen cases that have just about every permutation of abnormality (chest only, chest and abdomen, chest and bone, spleen and skin, etc.). While most patients present as children, a number of the cases that I have seen present as adults, some quite old, but I am not sure any are as old as this 69-year-old although she clearly has a long history of disease.

Kum Cooper: Janez, looks benign lymphangioma to me.

Otto Dietze: I did not know of a case with association of visceral and cutaneous involvement in lymphangiomatosis.

Goran Elmberger: Impressive gross! I have no further knowledge or experience but recently there was a full issue published on the subject!

Franco Fedeli: Superficial (dermal/subcutaneous) lymphangiomatosis in a patient with visceral involvement. Your case is very interesting and most likely belongs to an unknown syndromic disease.

Cyril Fisher: I agree looks like lymphangioma rather than lymphangiomatosis.

Christopher Fletcher: This is a remarkable lesion, the appearances of which differ somewhat from usual lymphangiomatosis in the limbs, insofar as there is multifocally prominent smooth muscle present within the walls of many of the more dilated lymphatic spaces. In addition, there seem to be increased numbers of large thick-walled conventional blood vessels in an unusually superficially location. One might wonder if this was some type of complex malformation. It seems to me that more and more vascular lesions are difficult to classify in any reproducible way.

Jeronima Forteza: There is no evidence against considering lymphangiomatosis as a generalized disease.

Giovanni Falconieri: Great case, Janez. Sorry, I am not familiar with these lesions to comment upon. Thank you for this contribution**.**

Thomas Krausz: Agree with diagnosis of lymphangiomatosis.

Janez Lamovec: My case. The patient had been recently operated because of another recurrence in the abdominal skin.

Hugo Dominquez Malagon: The labyrinthic channels and papillary structures concern me, could it be low grade angiosarcoma?

Markku Miettinen: Lymphangiomatosis/angiomatosis/diffuse lymphatic vascular malformation.

Liz Montgomery: Nice example of lymphangiomatosis.

Cesar Moran: It looks lymphangioma to me too. Whether this is associated to a particular condition or syndrome, I am not sure.

Dominic Spagnolo: The clinical and pathological findings seem fine for lymphangiomatosis, despite the relatively late age at presentation (?in her 30's). Stunning gross photo – thanks.

CASE NO. 17 - CONTRIBUTED BY MICHAL MICHAL:

Abbas Agaimy: Thanks you Michal for this fascinating case, I might have probably misinterpreted it as Leydig cell proliferation. I think the nuclear features are probably the "clue". Wouldn´t it be "psychologically" better to call these rare testicular neoplasms "intermediate trophoblastic tumor" to avoid the term "placental site"?

Phil Allen: Placental site trophoblastic tumor in mature non-cystic teratoma, right testis, male aged 24. Thanks for the contribution Michal. I certainly haven't seen one like this before.

Carlos Bacchi: Thanks for teaching me about the existence of this entity in the testis. I was not aware of it.

David Ben-Dor: It requires a great deal of imagination to think of this in the first place for which you deserve a lot of credit.

Michele Bisceglia: Placental site trophoblastic tumor of the testis arising as a component of germ cell tumor. Indeed, this is the most unusual type of tumors which can be seen associated in germ cell tumors and even the most difficult to pathogenetically explain. Never seen one.

Ira Bleiweiss: Wow again. Never seen this before either.

Thomas Colby: Wow what a case. I am not sure I would have been able to figure this one out. Thanks for sharing it.

Kum Cooper: Michal, agree with ITT arising in teratoma. I wondered about ETT (rather than PSTT) both morphologically and IHC: inhibin "in most of cells". hPL may be positive in ETT as well but not diffuse. P63 is discriminatory being positive in ETT diffusely.

Otto Dietze: I never encountered a case of PSTT outside the uterus.

Goran Elmberger: Great case and convincing interpretation. Say hello to 1st author, my old friend Fredrik.

Franco Fedeli: Placental site trophoblastic tumor of the testis arising as a component of germ cell tumor. This case demonstrates that any tumor type and tissue can be seen in germ cell tumors. Indeed a very rare occurrence.

Cyril Fisher: Amazing case - thank you for sharing this Michal.

Christopher Fletcher: A truly remarkable case – many thanks.

Jeronima Forteza: I agree with the diagnosis of PSTT.

Giovanni Falconieri: Impossible case Michal. Thanks for this educative contribution.

Thomas Krausz: Extraordinary case. Thank you very much for sharing with us.

Janez Lamovec: Thank you for this unique case.

Hugo Dominquez Malagon: Extraordinary case of teratoma with placental site trophoblastic tumor, I have not seen one like this before. Thank you Michal.

Markku Miettinen: Mixed testicular germ cell tumor with teratomatous and trophoblastic components. Maybe similar to the placental-like trophoblastic tumor, still malignant.

Cesar Moran: Great case.

Dominic Spagnolo: Wow! What a case. Thanks Michal for this PSTT arising in association with a teratoma.

Saul Suster: Great case – never seen this phenomenon before. This case is certainly a tribute to your extraordinary eyepower, Michal – congratulations on this spectacular diagnosis!

Ady Yosepovich: Thank you for sharing this extraordinary case.

CASE NO. 18 - CONTRIBUTED BY MARKKU MIETTINEN

Abbas Agaimy: Nice case of epithelioid angiosarcoma, I recently have seen a similar case in the palatine tonsil, also strongly positive for pankeratin (Hum Pathol, in press), thanks Markku.

Phil Allen: Epithelioid angiosarcoma, adrenal. This looks like an excellent example to me. None of the patients in Bruce Wenig's article (Am J Surg Pathol 18:62-73, 1994) were aged 48. This would have swelled Bruce's 9 to 10 cases.

Carlos Bacchi: Nice case.

David Ben-Dor: Something that makes sense for a change!

Michele Bisceglia: Epithelioid angiosarcoma involving adrenal. Typical case. Bruce Wenig contributed a case from his original series in AMR Seminar #13, Case 13) and Dr. Franco Fedeli recently contributed another similar one in AMR Seminar #60 (Case 12).

Ira Bleiweiss: Agree.

Thomas Colby: Agree with diagnosis.

Kum Cooper : Thank you Markku. I recently saw an FDC sarcoma positive with CD31. So my trust in CD31 has dwindled considerably; even though I knew that CD31 cross reacts with histiocytes.

Otto Dietze: Even from the H&E aspect a convincing diagnosis.

Goran Elmberger: Thanks for this impressive epitheloid angiosarcoma case. Pitfall in some cases when CK positive. Ultrastructurally one sees clear similarities between epi- and endo-thelium.

Franco Fedeli: Beautiful example of an entity which was first reported by Bruce and that I personally contributed in the previous AMR seminar. This is another example of a tumor which, despite being rare in general, is not rare in the files of AMR club and its members.

Cyril Fisher: Deep epithelioid angiosarcoma involving adrenal.

Christopher Fletcher : Angiosarcoma with focally epithelioid features. It is remarkable that the majority of angiosarcomas arising primarily in the adrenal have either partly or entirely epithelioid morphology – but this seems

to apply to the majority of angiosarcomas arising at intra-abdominal locations (at least outside of the liver and spleen).

Jeronima Forteza: I agree with the diagnosis: epithelioid angiosarcoma involving adrenal**.**

Giovanni Falconieri: Agree, very difficult. Thanks for this contribution.

Thomas Krausz: Agree with diagnosis.

Janez Lamovec: I've seen a couple of those; some at AMR slide seminars.

Hugo Dominquez Malagon: Agree with epithelioid angiosarcoma. There is a central cavity with blood and fibrin like an organizing hematoma with peripheral reparative changes. I have observed a similar situation in a number of cases of EHE. The question in my mind is: is the hematoma related with the pathogenesis of these neoplasms, or is it only a coincidence?

Liz Montgomery: What a beautiful classic epithelioid angiosarcoma. Thanks for this.

Cesar Moran: Very nice case.

Dominic Spagnolo: Very nice example of epithelioid angiosarcoma of the adrenal. I have not encountered this myself.

Saul Suster: Nice example! Thanks for sharing it. We are now becoming experts at this entity!

CASE NO. 19 - CONTRIBUTED BY JAMES STRAUCHEN

Abbas Agaimy: An interesting case and a true pitfall, thank you.

Phil Allen: ALK negative anaplastic large cell lymphoma with a prominent eosinophil reaction at right breast silicone implant site six years post operatively. I think I would have missed the diagnosis here. I wonder if the florid eosinophilia is a helpful warning sign.

Carlos Bacchi: We described one of such case (AIMM 17(4):301-306, 2009). Our case of ALCL occurred in a young female who developed the ALCL in her breast adjacent to a silicone breast implant 6 years after elective breast augmentation. She was treated with surgery and chemotherapy. She is well 3 years after her diagnosis.

David Ben-Dor: I read about this occurrence in the press online. It would help to have an index of suspicion for this entity based on the context. Without it Hodgkin's would be a contender.

Michele Bisceglia: Anaplastic large cell lymphoma, ALK negative, breast implant-related. Another case of breast-implant related ALC lymphoma was recently contributed by G. Berry in AMR seminar # 56 (case 4 therein). My comment to that previous case (along with some quoted references) which may still be appropriate and useful to have them at hand was the following "I do not know how many ALC lymphomas have been described in the breast so far outside the clinical setting of breast implant, however it seems of very rare (11 cases in The Netherlands in 17 years - De Jong et al JAMA 2008). Going through the literature, it seems that 21 cases on the whole have been described up to 2009 (Miranda RN, et al APLM 2009). ALC lymphomas of the breast have been seen both in relation to silicone breast implant and in relation to saline filled breast implant (Bishara et al Diagn Pathol 2009). In conclusion an association of ALC lymphoma of breast and breast implant has to be admitted."
Related references to the issue: Roden AC, et al. Seroma-associated primary anaplastic large-cell lymphoma adjacent to breast implants: an indolent T-cell lymphoproliferative disorder. Modern Pathol 2008; 21: 455-463. ///////// Wong AK, Lopategui J, Clancy S, et al. Anaplastic large cell lymphoma associated with a breast implant capsule: a case report and review of the literature. Am J Surg Pathol 2008; 32: 1265-1268. ///////// de Jong D, et al. Anaplastic large-cell lymphoma in women with breast implants. JAMA. 2008;300:2030-5. //////// Newman MK, et al. Primary breast lymphoma in a patient with silicone breast implants: a case report and review of the literature. J Plast Reconstr Aesthet Surg. 2008;61:822-5. ///////// Miranda RN, et al. Anaplastic large cell lymphoma involving the breast: a clinicopathologic study of 6 cases and review of the literature. Arch Pathol Lab Med. 2009;133:1383-90. ////////// Bishara MR, et al. Primary anaplastic large cell lymphoma of the breast arising in reconstruction

mammoplasty capsule of saline filled breast implant after radical mastectomy for breast cancer: an unusual case presentation. Diagn Pathol. 2009 Apr 2;4:11. ////////// Sahoo S, et al. Anaplastic large cell lymphoma arising in a silicone breast implant capsule: a case report and review of the literature. Arch Pathol Lab Med. 2003;127:e115-8. ///////// Gaudet G, et al.http://www.ncbi.nlm.nih.gov/pubmed?term=%22Freedman%20AS%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstract Breast lymphoma associated with breast implants: two case-reports and a review of the literature. Leuk Lymphoma. 2002;43:115-9.

Ira Bleiweiss: Agree.

Thomas Colby: Given the history I was prepped for a large-cell lymphoma but I have trouble appreciating the atypical cells. I suspect if I had a CD30 it would make it a little bit easier.

Kum Cooper: ALCL associated with breast implant. Very nice indeed! These are starting to make an appearance.

Otto Dietze: Thank you, I was not aware of this association before.

Goran Elmberger: Great case. Important to know this tentative association. Present case specially difficult due to dominating reactive inflammatory component – eosinophils. One need to keep guard up and do CD30! And possibly T-receptor rearrangement studies.

Franco Fedeli: Anaplastic large cell lymphoma, ALK negative, breast implant-related. A rare tumor. I understand this tumor does not pursue an aggressive course after surgery.

Cyril Fisher: ALCL, good diagnosis associated with silicone implant.

Christopher Fletcher: Very convincing example of implant-related ALCL. Are there any convincing data that these reflect an aberrant or prolonged abnormal immunologic response in this context? It seems quite surprising that this rare association was only recognized in relatively recent times.

Jeronima Forteza: Possibly, an inflammatory microenvironment with many eosinophilic cells. It can be a pathogenic component in this entity and supports the role played by the microenvironment in lymphogenesis. The non-existence of translocation is logical as well as the good prognosis related with this etiopathogenia.

Giovanni Falconieri: Great case. My perceiving skill was quite poor. I must admit that my first "blind" impression was that of a reactive, inflammatory reaction.

Thomas Krausz: I probably would have missed the lymphomatous nature of the infiltrate, however after reading your discussion I agree with the diagnosis.

Janez Lamovec: I must admit that I didn't spot anaplastic cells in this dense lympho-histiocytic, eosinophilic infiltrate with numerous capillaries and swollen endothelial cells. This is a great case to make one aware of such a possibility when examining implant capsule.

Hugo Dominquez Malagon: Difficult case, I missed the neoplastic cells.

Markku Miettinen: The lymphoma is hiding behind eosinophilis, nice case.

Liz Montgomery: Thanks for sharing this example of a case illustrating a timely issue. I guess ALK negative anaplastic large cell lymphoma is yet another reason that breast implants are overrated.

Cesar Moran: Great case.

Dominic Spagnolo: Nice example of implant-related ALCL of the breast. We have only two or three of these cases on file.

Saul Suster: Totally missed it! Thank you for the education.

Ady Yosepovich: Thank you for sharing this very important case.

CASE NO 20 - CONTRIBUTED BY SAUL SUSTER

Abbas Agaimy: Very unusual neoplasm at this location. The virocyte-like morphology is impressive. I also think that this lesion looks much like an inflammatory "non-myxo" low grade fibroblastic sarcoma. Was there any evidence for CIS in the overlying epithelium? Until specific stains or other ancillary tests were available, I would call it "unusual low-grade neoplasm with features of inflammatory myxohyaline fibroblastic sarcoma". It is difficult to tell if this a pattern or an entity? Thanks Saul.

Phil Allen: Undiagnosed, polypoid, probably benign, plasma cell rich tumor with polygonal and spindle shaped large cells featuring large vesicular nuclei and prominent nucleoli, proximal third of the oesophagus. I assume that the negative S100 stain has been repeatedly checked because it looks a bit like Rosai-Dorfman disease to me. I don't think it is an inflammatory myofibroblastic tumor, nor a myxoinflammatory hyaline tumor with virocyte-like cells. I too have seen several of the last tumor outside the extremities.

Carlos Bacchi: I would favor low-grade spindle cell sarcoma with inflammatory features.

Michele Bisceglia: ?myofibroblastic tumor ?inflammatory pseudotumor ?myxoinflammatory fibroblastic sarcoma. Never seen a case like this in the esophagus. Agree on both the interpretation given and perplexity. However at the end I would personally favour inflammatory myofibroblastic tumor.

Ira Bleiweiss: Inflammatory and myofibroblastic seems to be the theme of this seminar.

Thomas Colby: Favor IMT with dramatic nuclear atypia. Would favor careful follow-up because I think the lesion could recur.

Kum Cooper: Atypical inflammatory myofibroblastic tumor.

Otto Dietze: I believe that it is a reactive process and the RS-like cells remind me of proliferative fasciitis.

Goran Elmberger: No personal experience. You might want to try EBER – for EBV associated smooth muscle tumors. Otherwise molecular pathology might be helpful to penetrate some of the differentials mentioned IMT (ALK IHC; ALK FISH split) and LGMFS (PCR t(7;16); t(11;16). For others I guess we have nothing but morphology and to some extent IHC - MIFS & LGFMS.

Franco Fedeli: ?myofibroblastic tumuor ?inflammatory pseudotumor ?myxoinflammatory fibroblastic sarcoma. Am not capable to decide which is the correct diagnosis of the two. It seems that both are agreeable.

Christopher Fletcher: I agree that the degree of cytologic atypia is much greater than usually seen in inflammatory myofibroblastic tumors. Whenever encountering an unusual sarcomatous neoplasm in the esophagus, particularly if polypoid, I always wonder about the possibility of dedifferentiated liposarcoma. I think it would be difficult to fit this lesion within the morphologic spectrum of myxoinflammatory fibroblastic sarcoma – but, in truth, I have no clue what this is.

Jeronima Forteza: Of uncertain behavior, it could be an accurate diagnosis. The tumor can clinically behave as malignant tumor without mitosis. I have never seen it in this location but I would apply criteria for other locations.

Giovanni Falconieri: Very difficult. I cannot add anything more. Some cells have a myoid appearance. Yet, despite the evidences you mentioned, I would feel more at ease categorizing this tumor within the UMP/low grade tumor category.

Thomas Krausz: I favor inflammatory myofibroblastic tumor.

Janez Lamovec: I would prefer to call this lesion an inflammatory fibroblastic tumor.

Hugo Dominquez Malagon: Very impressive morphology, the cells have myofibroblastic appearance, they feature ample basophilic cytoplasm and peripheral rigid fibers that probably by EM would prove to be fibronexus. There is too much atypia for too few mitoses, anyway, I would sign this case as "inflammatory myofibroblastic tumor of uncertain malignant potential".

Markku Miettinen: Histologically fits best for inflammatory myofibroblastic tumor. It has the constellation of spindled tumor cells with prominent nucleoli with a lymphoplasmacytic infiltration. Most series have accepted ALK-negative cases, up to 50% of total cases sometimes. I saw recently another esophageal tumor like this, also ALK-negative.

Liz Montgomery: This looks "fake" to me and like a really over-the-top version of the pseudosarcomatous changes in GI tract polyps that have been known for a long time. The only thing is that it is SO exuberant that one would not dare report it without a carefully worded note containing a suggestion for follow-up as a precaution. I have a little stack of very similar things in the colon that I am waiting to "ripen" with more follow-up before I publish them but so far so good.

1. Shekitka KM, Helwig EB. Deceptive bizarre stromal cells in polyps and ulcers of the gastrointestinal tract. Cancer. 1991 Apr 15;67(8):2111-7.
2. Jessurun J, Paplanus SH, Nagle RB, Hamilton SR, Yardley JH, Tripp M. Pseudosarcomatous changes in inflammatory pseudopolyps of the colon. Arch Pathol Lab Med. 1986 Sep;110(9):833-6.

Cesar Moran: I favor myofibroblastic tumor.

Dominic Spagnolo: I have not seen this in the esophagus before. Nor anything so cytologically bizarre without mitotic activity elsewhere. The phenotype is more fibroblastic than myofibroblastic. I don't have any suggestions beyond yours, but I would have to regard it as a borderline lesion, ?low grade inflammatory fibrosarcoma. I can't discount that it may be entirely benign.

Ady Yosepovich: A very bizarre case, did you do lymphoma markers? Anyhow, I favor a benign/ reactive proliferation.

CASE NO. 21- CONTRIBUTED BY LAWRENCE WEISS:

Abbas Agaimy: Indeed, a pretty case, thanks.

Phil Allen: Dedifferentiated chondrosarcoma with giant cell tumor-like areas, proximal humerus and adjacent soft tissues. Don't worry Larry. You managed to put both the relevant areas on my slide.

Carlos Bacchi: Thanks for sharing. I have never seen such a case before.

David Ben-Dor: As expected the cartilage looks deceptively bland. However the areas mimicking giant cell tumor of bone to me look atypical enough to make me wonder about the diagnosis of the "benign" type, especially as I would assume it would be exceedingly rare in this age group.

Michele Bisceglia: Yes, agree. Nice example.

Ira Bleiweiss: Agree.

Thomas Colby: Agree with diagnosis. Beautiful case.

Kum Cooper: Yes, very pretty indeed. I got both areas very nicely. Thank you Larry.

Otto Dietze: I have not seen this type of dedifferentiation in chondrosarcoma before; my first impression was that of a malignant mesenchymoma with chondrosarcoma, MFH and MPNST.

Goran Elmberger: Misguided biopsy… I like expression even if we never know where the money is beforehand. Large and multiple is always something to pray for.

Franco Fedeli: Dedifferentiated chondrosarcoma with giant cell tumor-like areas. Beautiful example of a (rare type) of dedifferentiation. As previously said, chondrosarcoma was the first tumor in which dedifferentiation was identified (Dahlin, 1971).

Cyril Fisher: Very nice example of dedifferentiated chondrosarcoma.

Christopher Fletcher: A very convincing and pretty case!

Jeronima Forteza: The component of giant cell can be accompanying of certain kinds of bone tumors as it is the case here.

Giovanni Falconieri: Nice case, of course I agree with interpretation**.**

Thomas Krausz: Great case.

Janez Lamovec: Dedifferentiated chondrosarcoma. We saw several cases although not as a giant cell tumor but mostly as MFH-like dedifferentiated component, and in one case as a rhabdomyosarcoma.

Hugo Dominquez Malagon: Agree with dedifferentiated chondrosarcoma. In the places with multinucleated (osteoclastic) giant cells the stromal cells are also pleomorphic. I would call it "dedifferentiated chondrosarcoma with abundant osteoclastic cells (probably reactive)".

Markku Miettinen: Fully agree on dedifferentiated chondrosarcoma.

Liz Montgomery: Very instructive – would be really treacherous on a needle biopsy.

Cesar Moran: Interesting case.

Dominic Spagnolo: Agree Larry. Even the giant cell tumour-like areas look malignant to me, not just conventional GCT-like. Thanks for the case**.**

CASE NO. 22 - CONTRIBUTED BY BRUCE WENIG:

Abbas Agaimy: Unfortunately, I did not receive a slide from this case of oncocytic carcinoma.

Phil Allen: Oncocytic carcinoma involving facial nerve, left parotid. The cells look terribly benign but that did not prevent the invasion of the facial nerve. Thanks for this instructive case.

Carlos Bacchi: Thanks Bruce for teaching me how to diagnose oncocytic carcinoma of salivary gland with this nice case.

David Ben-Dor: I agree on the total lack of diagnostic atypia in the tumor- I guess one can never be too careful and not prejudge anything until totally examined. There is obvious perineural invasion at the periphery- also the peripheral aspect is very irregular and I found a focus in which the tumor is poking its way into the fat. I found a big juicy nerve inside the tumor surrounded by tumor- presumably entrapped. I also found a few small ductules- maybe these are formed by the tumor but they are lined by low cuboidal cells that look different from the tumor; if these are benign then are they remnants of the pre-existing non- neoplastic gland? Can a malignant tumor form benign ducts (or benign looking ones)? There are scattered small foci with cytoplasmic clearing- this is of personal interest in connection with the case that I'm submitting to this current seminar, and also regarding a case submitted to a previous one of oncocytosis/benign oncocytoma of the parotid with extensive clear cell change. As in this case this change in of itself doesn't have diagnostic relevance but when seen throughout the lesion it can be deceptive.

Michele Bisceglia: Oncocytic carcinoma of parotid gland. The tumor is oncocytic and given your description no question the tumor is carcinoma. However apart from few foci of peripheral infiltrative growth, no other suspected

signs of malignancy is present in my slide (no perineurial invasion nor angioinvasion; no mitoses; no necrosis; bland cytology).

Ira Bleiweiss: I find it hard to convince myself that this is malignant, even though I see perineural invasion.

Thomas Colby: Agree with diagnosis. I find a nerve embedded within the middle of the lesion and a peripheral multinodular character that is of more concern than the average well-circumscribed oncocytoma.

Kum Cooper: I had to go back to the slide to find the perineural invasion. The islands of clear cells are interesting. ?clear oncocytic cells Bruce.

Otto Dietze: I cannot remember a case of oncocytic carcinoma in this age group.

Goran Elmberger: Tough case. In my single section I could not find convincing evidence for infiltrative growth or perineural growth. I guess if all sections looked the same – and I block everything – I would have a hard time signing out the case as malignant. If perineural invasion is present elsewhere as indicated by Bruce I would go along with oncocytic carcinoma diagnosis. Other accepted criteria for malignancy worth looking for are obviously destructive growth towards mesenchymal or salivary gland tissue surrounding tumour, invasion of venous vessels (El-vG) or LVI (D2-40, CD31, CD34). The outer contour does look a bit rugged and this could be a subtle clue to invasion but to me not enough. I also see a small nerve entrapped within outer tumour lobules as can be seen in tumours with pseudopodia-like growth. A Ki-67 labeling index of > 6.5 % might indicate malignant oncocytoma (Ito). Part of the problem is that malignant oncocytomas usually are regarded as high-grade tumours were we should not have to look hard for evidence of invasion, LVI or perineural growth. On the other hand recurrence and metastases have been described with benign appearing oncocytoma-like lesions as well – "benign metastasizing oncocytomas"? Value of sampling cannot be underestimated!

Franco Fedeli: Oncocytic carcinoma of parotid gland. Nice and misleading case: cytology is really bland and mitoses difficult to find if any.

Cyril Fisher: Oncocytic tumor with infiltration indicating malignancy, very pretty.

Christopher Fletcher: The valuable and informative discussion is much appreciated. I suspect that I would not have recognized this lesion as being malignant.

Jeronima Forteza: I agree with the diagnosis of oncocytic carcinoma.

Giovanni Falconieri: Great and challenging case, Bruce. The young patient age is truly disturbing**.**

Thomas Krausz: Bruce, I am sure I would have sent his case for your opinion. It is so differentiated

Janez Lamovec: I couldn't find perineural invasion so I thought of oncocytoma.

Hugo Dominquez Malagon: I agree with the diagnosis of oncocytic carcinoma, however I see foci of clear cells, could it be an oncocytic acinar carcinoma?

Michal Michal: I would still consider the diagnosis of benign oncocytoma in this case.

Markku Miettinen: Agree on oncocytic carcinoma. Some peripheral tumor nests may be intra (lympho)vascular.

Cesar Moran: Nice example. I initially thought it was an oncocytoma.

Dominic Spagnolo: Treacherously bland but invasive oncocytic carcinoma. Thanks for the case.

Saul Suster: Very difficult case – given vascular and perineurial invasion (which were not present in my slide) I would agree with calling this carcinoma, but I would add the qualifier "low-grade" to it.

Ady Yosepovich: Very unusual case, thank you for sharing.

CASE NO. 23 - CONTRIBUTED BY ADY YOSEPOVICH

Abbas Agaimy: Nice case illustrating a rare variant of breast cancer.

Phil Allen: Triple negative adenoid cystic carcinoma with solid areas, left breast. I hope that the solid mitotically active area does not indicate an increased potential for axillary lymph node metastases.

Carlos Bacchi: Agree with adenoid cystic carcinoma probably with dedifferentiated area (solid area). I precisely asked Dr. Ian Ellis from University of Notttingham, England, if the frequency of adenoid cystic carcinoma of breast is increasing or not. He replied that the frequency is not increasing and the reason we are seeing more cases is that the pathologist have learned how to recognize this type of low-grade carcinoma in the breast.

David Ben-Dor: Welcome to the club Ady; how many breast mavens do we have already?- there can never be too many in this tricky area. I've been enjoying our fruitful interactions regarding mutual cases until now and I look forward to continuing in this vein through the cases you submit to the club. Regarding your case, I see foci that do bring to mind adenoid cystic carcinoma, other areas with cribriform morphology, and others which I would consider as high grade carcinoma n.o.s. At least the former shows a great deal of mucinous secretions consistent with the diagnosis.

Michele Bisceglia: Adenoid cystic carcinoma of the breast with solid high grade areas. A prototypical salivary gland-type tumor in the breast.

Ira Bleiweiss: Agree, nice example. Welcome to the Club, Ady.

Thomas Colby: Some areas look like ACC. Some areas look like epithelial myoepithelial carcinoma. Some areas are obviously quite high grade for an ACC.

Kum Cooper: I suppose this is what the head and neck people called dedifferentiated ACC!

Otto Dietze: I have seen several cases of ACC in the breast but none of the high grade variant.

Goran Elmberger: Interesting case and discussion. And very important ddx for patient care obviously. To me it is not a very typical case for adenoidcystic carcinoma but I believe the spectrum of morphology in this entity is often underestimated. Here we have fairly typical architectural patterns including cribriform areas and basement like globular material focally but the cytology is not exactly what we expect. I would perform various IHC markers for ME and luminal cells to convince me fully this is indeed a biphasic tumor with luminal and myoepithelial component. For ME differentiation I need more than just p63 – I need pattern and some "myogenic" markers as well. There is now a molecular marker translocation available that I use in difficult cases like this even if its sensitivity seems to be under 100%. In the more solid area I see many "soap bubble" cells always making me think of acinic cell ca… PAS?

Franco Fedeli: Adenoid cystic carcinoma of the breast with solid high grade areas. This tumor seems to be of much lower aggressiveness than its salivary gland counterpart.

Cyril Fisher: Rare adenoid cystic carcinoma with mixed patterns including solid areas in breast.

Jeronimo Forteza: I agree with the diagnosis: adenoid cystic carcinoma of the breast with solid high grade areas.

Giovanni Falconieri: Welcome to the club! A difficult case to start with. I agree with your assessment. Thank you for this contribution.

Thomas Krausz: On the basis of the high-grade solid areas I would worry about a more aggressive behavior than a conventional adenoid cystic carcinoma.

Janez Lamovec: ACC of the breast with solid areas. We've seen some such cases at our institution.

Hugo Dominquez Malagon: I agree with the diagnosis of ACC of the breast.

Markku Miettinen: I agree on ductal/adenocystic carcinoma with no prominent oncocytoid morphology.

Cesar Moran: Very nice example.

Dominic Spagnolo: Welcome to the club Ady. Very nice case of breast ACC with solid high grade transformation.

CASE NO. 24 - CONTRIBUTED BY ABBAS AGAIMY:

Phil Allen: Pancreatic-type acinar cell carcinoma of the liver. I would never have got this one right but the positive amylase and lipase as well as the unusual morphology in the H and E cannot be ignored. Thanks very much for the contribution.

Carlos Bacchi: Amazing case!! Very convincing acinar carcinoma pancreatic-type.

David Ben-Dor: Welcome to the club!!- two newbies in a row. I agree that this is an acinar neoplasm but there is a focus which looks ductal to me. Certainly after reading the explanation I could see the similarity to pancreas. As stated there is eosinophilic material in the apical cytoplasm but this looks to me more blobby resembling Mallory hyaline than it does the more finely granular cytoplasmic particles seen in pancreas exocrine cells. I also wonder whether it is mandatory to document trypsin positivity before asserting pancreatic differentiation as a fact. Maybe this could be an unusual tumor showing features of hepatocytic and pancreatic differentiation- since these tissues as stated have common ancestry.

Michele Bisceglia: Pancreatic-type acinar cell carcinoma of the liver. This tumor type has been reported only rarely in ectopic sites, as a pure or mixed tumor associated with other glandular components, with and without contiguous heterotopic pancreatic tissue. Am impressed by your 4 such cases in the liver (your quoted reference), and agree with you that maybe this tumor is under-recognized (both in the liver and in other tracts of the digestive system) and misunderstood with other tumor types. Very recently another case of this tumor type has been reported in the stomach (Coyne JD. Pure pancreatic-type acinar cell carcinoma of the stomach: a case report. Int J Surg Pathol. 2012;20:71-3).

Ira Bleiweiss: What a great case to start with. Welcome.

Thomas Colby: Agree with diagnosis. Very cool case.

Kum Cooper: Great case, It certainly had "pancreas" written all over it! We recently diagnosed a pancreatic duct carcinoma arising in ectopic pancreas in the liver!

Otto Dietze: I have not seen this tumor in the liver before.

Goran Elmberger: New to me and all I guess. Beautiful and biologically important concept. Now we not only have to deal with hepatoid carcinomas but also pacreatoid ones and probably much more to come… Transdifferentiation seems to be a "hot" word amongst our experimental colleagues those days. For me dealing with our CUO conferences this is a real and practical dilemma. Extensive IHC or expression analyses on mRNA level does not always help… Now we started looking for oncogenic pathway activation and drugable targets in those patient populations in addition to traditional histogenetic classification attempts.

Franco Fedeli: Pancreatic-type acinar cell carcinoma of the liver. Nice case. Agree on the concept of transdifferentiation of stem cells of biliary ducts, at least for cases not accompanied by ectopic pancreatic tissue.

Cyril Fisher: Liver with pancreatic-type acinar cell carcinoma. I have not seen this before.

Christopher Fletcher: This is a very convincing case. I was previously unaware that such pancreatic-type acinar cell tumors could arise in the liver.

Jeronima Forteza: As it has been put, it is important to rule out the possibility of a pancreatic tumor. Sometimes it can be really small. However, nowadays, through imaging those tumors can be ruled out.

Giovanni Falconieri: Welcome to the club! I am not aware of this entity, but I found the case presentation excellent. Thank you for this contribution.

Thomas Krausz: Agree with diagnosis. I haven't seen primary pancreatic-type acinic cell carcinoma in the liver before.

Janez Lamovec: I have never seen such a tumor of liver before. Thank you.

Hugo Dominquez Malagon: Agree with the diagnosis of pancreatic type acinar cell carcinoma but there is also a ductal component, there are works in the literature that talk about the multipotential "oval cells" that are able to differentiate into bile ducts, hepatocytes, and probably components of the pancreato-biliary system.

Michal Michal: Beautiful case!

Markku Miettinen: Could be pancreatic acinic cell carcinoma, at least carcinoma with pancreatic acinic cell-like differentiation.

Liz Montgomery: The tumor seems reasonable for a pancreatic acinar type carcinoma.

Cesar Moran: Great case.

Dominic Spagnolo: Welcome to the club Abbas. Beautiful case of pancreatic acinar cell CA of the liver. Have not seen these before!

Saul Suster: Thank you for contributing such an exotic case to the club, and welcome!

Ady Yosepovich: Very unusual case, thank you for sharing.

CASE NO. 25 - CONTRIBUTED BY SAUL SUSTER

Abbas Agaimy: Thank you Saul for this unusually located neoplasm. I agree with your interpretation as "non-acral" myxoinflammatory fibroblastic sarcoma as the most likely diagnosis. I have difficulty to call it benign. Both your cases ". Dr. Lauren V. Ackerman and his man from Istanbulremind of Dr. Rosai´s commentary "

Phil Allen: Undiagnosed, multinodular, encapsulated, myxoid, fibrohistiocytic tumor with inflammatory cell infiltrate and rare mitoses, presumably low grade, vulva, female aged 32. I too don't recognise this. I agree it exhibits some features of a myxoinflammatory hyaline tumor but the resemblance is not particularly close. In the bad old immunohistochemical days, this would probably have been called a low-grade myxofibrosarcoma (myxoid malignant fibrous histiocytoma). Fortunately the proponents of that technique are losing their vigour and may even be dying out to be replaced by those who carry PCR machines around at USCAP meetings to justify their honesty when they declare that they don't know the answer.

Carlos Bacchi: I would favor pseudotumoral reactive myofibroblastic proliferation and recommend only local excision.

David Ben-Dor: On low power it has a vague resemblance to the low grade fibromyxoid sarcoma (described by Evans). I realize the location doesn't make sense. The location would be good for aggressive angiomyxoma but I'm not sure if the histology fits (I have no personal familiarity with any of these entities).

Michele Bisceglia: ?pseudotumoral reactive fibro/myofibroblastic proliferation; ?myxoinflammatory fibroblastic sarcoma of vulva. Very unusual. Maybe I would favor a reactive myofibroblastic proliferation.

Ira Bleiweiss: What is it with the Ob/Gyns who think everything is a "Bartholin's Cyst". Yet another this month's "theme" case of a benign inflammatory and myofibroblastic lesion.

Thomas Colby: I vote for low-grade sarcoma.

Kum Cooper: Saul I am stumped. Sorry!

Otto Dietze: I favor a reactive process, presuming that ALK was negative.

Goran Elmberger: Sorry. No clever ideas and I am clearly not one of the group's soft tissue gurus even if my tissues are getting softer every day.

Franco Fedeli: ?pseudotumoral reactive fibro/myofibroblastic proliferation; ?myxoinflammatory fibroblastic sarcoma of vulva. Saul, this tumor evokes your previous case # 20 in this same seminar. My comment is the same as therein.

Christopher Fletcher: I don't believe that this vulval lesion fits perfectly with any defined entity and I would only be descriptive and label it as something such as an 'atypical myxoid spindle cell neoplasm, best regarded for treatment purposes as low-grade sarcoma'.

Jeronima Forteza: I agree with Saul's possibility of a inflammatory myofibroblastic pseudotumor; most likely a bening one. Although morphology does not support it much, through immunohistochemstry I would rule out a pseudotumor of dendritic cells.

Giovanni Falconieri: Don't know either, Saul! It does not look malignant.

Thomas Krausz: Difficult case. I would like to suggest the diagnosis of cellular angiofibroma with sarcomatous transformation. I am looking forward to Chris Fletcher's opinion in view of his publication on this topic (Am J Surg Pathol 2010; 34:707-714).

Janez Lamovec: This tumor is somewhat reminiscent of myxoinflammatory fibroblastic sarcoma but without much inflammation and without characteristic cells, so, it should be something else. However, I think this is a tumor and not a reactive condition. I am sorry for not being very helpful.

l.

Hugo Dominquez Malagon: Don't know the diagnosis. Perhaps a kind of "symplastic" leiomyoma or a myofibroblastic tumor of the specialized lower genital tract (a fancy name could be applied).

Michal Michal: Myxoinflammatory fibroblastic sarcoma!!

Markku Miettinen: I don't know either but would consider inflammatory myofibroblastic tumor (ALK?) and a Gyn-stromal neoplasm (ER, PR?). Probably myofibroblastic. Atypical myofibroblastic neoplasm. May have potential to recur but doubt metastatic potential.

Liz Montgomery: Hmmm. Indeed has some features reminiscent of myxoinflammatory fibroblastic sarcoma but also wondered about a weird neurothekeoma.

Cesar Moran: Before I knew the location I thought myxoinflammatory fibroblastic sarcoma. Then I found out the anatomic location. Now I am not sure.

Dominic Spagnolo: Weird circumscribed lobulated inflammatorty myxofibro…something. I don't recognize it. My hunch is it is pseudosarcomatous but can't be sure it is not a low grade myxoinflammatory fibrosarcoma.