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FOCUS

PAPANICOLAOU SOCIETY OF CYTOPATHOLOGY

Companion Society of the United States and Canadian Academy of Pathology

Dedicated to Clinical Practice, Clinical Education and Clinical Research

From the Editor's Desk

I am delighted to invite Sudeshna Bandyopadhyay MD as guest editor for December 2012 issue of Focus.

I thank Dr. Bandyopadhyay for the excellent organization and appreciate the hard work. Please enjoy the issue and Happy Holidays to all PSC members.

Sincerely,

Vinod B. Shidham,
MD, FRCPath, FIAC

From the Guest Editor's Desk

Sudeshna Bandyopadhyay, M.D

I thank Dr. V. Shidham for giving me the opportunity to put together this edition of Focus. We have some very interesting and informative articles including one which studies the sensitivity and specificity of parakeratotic like cells in effusion fluids secondary to malignant mesothelioma. In addition, there is a brief review of the Pap test and its continued utility in the era of HPV vaccinations.

The International Academy of Cytology is organizing the 18th International Congress of Cytology from 26-30 May, 2013. Details regarding the scientific program, registration forms and call for abstracts are available on their website www.cytologyparis2013.com.

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Presidential Message for Focus

This past year has been a productive one for members of the Papanicolaou Society of Cytopathology. Members of the society have given a variety of scientific programs throughout the world. These have included presentations at Dubrovnik, Croatia and Cape Town, South Africa. The society has also given a number of scientific lectures and seminars within the United States and Canada. These presentations represent an integral part of the Papanicolaou Society's commitment to professional education. Other components to this educational mission are the presentation of tutorials and workshops throughout Africa and Southeast Asia.

The upcoming election for officers of the Papanicolaou Society signals the end of my term as president, but I look forward to continuing my participation in the society as past president. The

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The Humanities Corner

The story of one monk, peas and chromosomes, or how cytology came to the rescue of genetics

Manon Auger, MD, FRCS (C), McGill University Health Center, Montreal, Quebec, Canada

Nowadays, we often see the basic sciences as almost totally disconnected from cytology with only rare interactions between the two domains. However, historically, the exchanges between them have been significant and led to important discoveries. The story of the early days of modern genetics with Mendel, Boveri and Sutton is a good example of such fruitful interplay.

Gregor Mendel (1822-1884) was a scientist and monk living in the Austrian Empire. Mendel, who had worked as a gardener in his childhood, initiated his religious life in 1843 by entering the Augustinian Monastery of St-Thomas in Brünn. In 1851, he was sent by the abbey to study physics at the University of Vienna, where he was exposed to the most recent work in plant cytology. Upon his return to the monastery, Mendel conducted studies, between 1856 and 1863, on 29,000 pea plants in the experimental garden that had been planted originally in 1830. From the results obtained, in which he observed that 1 out of 4 pea plants had had purebred recessive alleles, 2 out of 4 were hybrid and 1 out of 4 were purebred dominant, he summarized his findings in two laws:

- "First law" or "law of segregation": according to this law, every individual has a pair of alleles for any particular trait and each parent passes a randomly selected allele of only one of these to its offspring. The offspring then is endowed with its own pair of alleles for that trait. The dominant of the two alleles in the offspring determines how it expresses that trait.
- "Second law" or "law of independent assortment": this law states that separate traits are passed independently of one another from parents to offspring.

Mendel presented his results at the Natural History of Society of Brünn in 1865 and published them in 1866. Although his conclusions were not completely unknown to biologists of the time, they were thought, even by Mendel himself, to be applicable to only certain species or traits. Although he is now considered the father of modern genetics, he attained fame only posthumously with the "re-discovery of his laws" in 1900 by three European scientists, Hugo de Vries, Carl Correns and Erich von Tschermak.

So, what about the connection between Mendel and cytology? The link exits through the works of Walter Stanborough Sutton and Theodor Boveri who both experimented with cytology and proved that Mendel's laws applied to chromosomes.

Walter Stanborough Sutton (1877-1916) was an American geneticist whose most significant contribution was his theory that the Mendelian laws of inheritance could be applied to chromosomes. Sutton was raised on a farm in Kansas and became, in his sophomore year, a student of C.E. McClung (1870-1946), a prairie pioneer cytologist at the University of Kansas. Taking advantage of the abundance of grasshoppers in Kansas, McClung had founded a school of "grasshopper cytologists". After completing his master's degree, and following McClung's advice, Sutton moved to Columbia University to study zoology under Dr. Edmund B. Wilson under whose supervision he wrote his two seminal papers in genetics. In 1902, he published "On the morphology of chromosome group in Brachystola after magna in which he shows that chromosomes obey Mendel's rules; in it, he provided the first convincing evidence for the chromosome theory of heredity. His conclusions were based on his numerous cytological observations of grasshopper cells after noticing that chromosomes occur in distinct pairs and segregate at meiosis. He clearly showed that each chromosome is different, and meiosis reduces the number of chromosomes in the gametes. In a subsequent paper published 1903, "The Chromosomes in Heredity", he drew even more strongly the connection between Mendel's laws of heredity and chromosomes. The success of Sutton is due in large part to his discovery of Brachystola magna which had easily visible meiotic chromosomes. Sutton's profound knowledge of cytology is obvious in his beautiful drawings of chromosomes and cells in his papers (which unfortunately could not reproduced here due to copyright restrictions). Sutton never finished his PhD in zoology as he continued his studies in medicine and became a surgeon. He died at the young age of 39 from complications following a ruptured appendicitis. Ironically, he had previously written a paper on that very subject.

Another important player in this story is Theodor Boveri (1862-1915), a German biologist who independently reached the same conclusions as Sutton. It is Wilson who coined the name the "Boveri-Sutton chromosome theory" for their concepts. Boveri was one of the first to experiment in the field of cytology. He chronicled the development of sea urchin eggs, in particular when one egg was fertilized by two sperms. From his own observations and experiments with sea urchins, Boveri showed that it was necessary to have all the chromosomes present in order to obtain normal embryonic development, and that with any more or any less chromosomes, there was abnormal development. When Mendel's laws were rediscovered in 1900, Boveri recognized the correlation between Mendel's laws and the cytology work being done on chromosomes.

Hopefully we can learn from history and foster a greater interplay between the basic sciences and cytology as both scientists and cytologists have much to learn from each other.

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President's Message

society is fortunate to have Zubair Baloch succeeding me as president. I know he brings substantial expertise and enthusiasm to the position. The ballot for the 2012 election has been finalized with the slate as follows

President Elect: Tarik Elsheikh and Matt Zarka
Treasurer: Helen Wang and Britt-Marie Ljung
Board Members at large (two positions)
Philippe Vielh, Fernando Schmitt, Beatrix Cochand-Priollet and Z. Laura Tabatabai

I encourage all members of the Papanicolaou Society to vote in this important societal election.

The Papanicolaou Society of Cytopathology presented in Dubrovnik, Croatia, well-received programs covering topics ranging from "Lean and New Technology Implementation", "Ancillary Testing and FNA" and "Surprises During the Daily Practice of Fine Needle Aspiration". Presenters included Philippe Vielh, David Chheing, Tarik Elsheikh and Fernando Schmitt. Between September 30th and October 5th the 24th congress of the International Academy of Pathology was held in Cape Town, South Africa and again members of the Papanicolaou Society took an active part in the educational presentations. Dr. Andrew Field organized a seminar on issues in cytopathology with lectures given by Drs. Zubair Baloch, Lester Layfield, Martha Pittman and Matt Zarka among others.

During the November meeting of the American Society of Cytopathology, members of the Papanicolaou Society presented a state of the art symposium entitled, "Pancreatic Cytopathology: Past, Present and Future." Topics discussed include pancreatic cytopathology - terminology update, role of FNA in the diagnosis of solid "non-adenocarcinoma" tumors, cystic lesions: cytomorphology and role of fluid analysis, cytology of pancreatic and biliary brushings and "the clinical perspective of pancreatic cancer, role of multidisciplinary clinics, new therapies and molecular markers." This presentation was in conjunction with the Papanicolaou Society's development of Guidelines for Pancreatical Biliary Cytology. The preliminary guidelines are posted on the Papanicolaou Society website.

The diagnostic scheme proposed by the Papanicolaou Society of Cytopathology for pancreatic cytology is as follows:

I. Non-diagnostic
- Insufficient cellular material for diagnosis
- Specimen altered by artifactual changes precluding interpretation

II. Negative
- Pancreatitis-acute, chronic or autoimmune
- Pseudocyst
- Lymphoepithelial cyst
- Spenule/accessory spleen

III. Atypical
- Mild-moderate cellular atypia, NOS
- Atypical features due to reactive changes

IV. Neoplastic
- Benign
  - Serous cystadenoma
  - Mature teratoma
  - Schwannoma

- **Other**
  - Pancreatic neuroendocrine tumor
  - Solid-pseudopapillary neoplasm
  - Mucinous cyst (IPMN or MCN)
  - Gastrointestinal stromal tumor

V. Suspicious
- Severe cellular atypia suspicious for invasive ductal adenocarcinoma or other high-grade malignant neoplasm

VI. Positive/Malignant
- Adenocarcinoma of pancreatobiliary ducts
- Acinar cell carcinoma
- High grade neuroendocrine carcinoma
- Pancreatoblastoma
- Lymphoma
- Metastasis

Readers are encouraged to visit the Papanicolaou Society website for a more in-depth presentation of the guidelines and to give comments.

The Papanicolaou Society encourages its members to take part in its scientific programs and aid in the development of future guidelines.

The past two years as president of the Papanicolaou Society have been both productive and personally rewarding. I look forward to continuing productive involvement with the society. I know that Dr. Baloch will continue the current programs as well as developing new initiates as he leads the society into the future.

Lester J. Layfield, MD
President, Papanicolaou Society

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From the Guest Editors Desk

Executive board nominations and biosketches of candidates are included as well. Details about various benefits of PSC are highlighted on the last page. Please recommend to your colleagues to join the PSC (www.papsociety.org).

Members and other readers are encouraged to send articles or other contributions (interesting images in cytology, book reviews, case reports, reviews etc) to V. Shidham or any of the focus editorial board members. We are accepting contributions for June, 2013 edition. It is preferable to submit contributions for the upcoming issue by April 15th, 2013.

Sincerely,

Sudeshna Bandyopadhyay, M.D.
Guest Editor

CytoJournal

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Research Article

Parakeratotic-like cells in effusions — A clue to diagnosis of malignant mesothelioma

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Abstract

Background: Malignant mesothelioma (MM) is an aggressive neoplasm with a poor prognosis. Its incidence has been increasing worldwide. Cytological examination of an effusion is often the first opportunity to diagnose MM. However, the cytological diagnosis of MM can be difficult. We have noticed that parakeratotic-like cells, with orange cytoplasm and pyknotic nuclei, are present in many cases of mesothelioma on Papanicolaou-stained cytology slides. Although this cytological finding has been described previously, to our knowledge, there has been no systematic study of this finding. Our study is to determine whether the presence of small parakeratotic / orangeophilic cells (PK-like cells) is specific for the cytodiagnosis of mesothelioma. **Materials and Methods:** A total of 90 body fluid cases were selected from our archived specimens in the Cytology Section at the University of Chicago Hospital accessioned between January 2000 to November 2011. They included 30 cases of mesothelioma, 30 cases of adenocarcinoma, and 30 cases of reactive mesothelial cells. **Results:** PK-like cells were present in 83% of the mesothelioma cases, 13% of the adenocarcinoma cases, and 7% of the reactive cases. Our data showed that the presence of PK-like cells has a specificity of 90%, sensitivity of 83%, positive predictive value of 81%, and negative predictive value of 84% for the diagnosis of malignant mesothelioma in body cavity fluids. **Conclusion:** The presence of PK-like cells in the effusion specimen, especially in pleural effusions, is a highly specific and moderately sensitive cytological feature for diagnosis of mesothelioma.

Key words: Adenocarcinoma, effusion, malignant mesothelioma, parakeratotic-like cells

INTRODUCTION

Malignant mesothelioma (MM) is an aggressive neoplasm with a poor prognosis. Approximately 3300 new cases of MM are diagnosed annually in the United States,[1] and about 85% of the MM are present with pleural disease, although MM can also arise in other locations, including the peritoneum, pericardium or tunica vaginalis.[2] The major risk factor is asbestos exposure; however, other factors such as the Simian virus 40 infection and inheritance of susceptibility genes are likely to play a role.[3,4] Although MM has a limited response to surgery, conventional chemotherapy, and radiotherapy,[1] recent clinical trials have suggested that the combination of pemetrexed plus cisplatin improve survival and quality of

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life[5,6] in MM patients. Therefore, early diagnosis of MM is important, because it may significantly improve a patient's survival.[7] As the disease manifests initially as a recurrent, unilateral, bloody pleural effusions in most patients,[8] the cytological examination of the effusion fluid can provide a simple and fast diagnostic test. However, the reported sensitivity and specificity for the cytological diagnosis of MM varies greatly in literature,[9] due to the lack of specific cytological features of MM. We have noticed that many mesothelioma cases have parakeratotic-like small, orange cells with pyknotic nuclei (PK-like cells)[10] on Papanicolaou-stained cytology slides. This feature was previously described by Whitaker[11] as an uncommon, but fairly specific feature of MM. However, to our knowledge, there is no systematic study of this finding for the diagnosis of MM. Our study was aimed at determining the sensitivity and specificity of the presence of PK-like cells for the diagnosis of mesothelioma.

MATERIALS AND METHODS

Thirty cases of histologically documented malignant mesothelioma, with corresponding body cavity fluid cytological specimens (pleural effusions, ascites, pericardial effusions) were selected from the archived material in the Cytology Section of the University of Chicago Hospital, accessioned between January 2000 and November 2011. All cases were epithelioid type of MM, confirmed by histological and immunological studies. Control groups included 30 cases with a diagnosis of reactive mesothelial cells and 30 cases of adenocarcinoma in body fluids. The body fluids were spun down and were then processed with standard Cytospin and ThinPrep protocols. Only slides stained with the Papanicolaou method were selected for this study. There was no difference noticed on the slides with regard to the color or cytology by both Cytospin and ThinPrep protocols.

Of the 30 MM cases, 24 cases were from pleural effusions, four cases were from ascites, and two were from pericardial effusions. Of the 30 adenocarcinoma cases, 20 cases were from pleural effusions and ten cases were from ascites. In the adenocarcinoma group, nine cases had previous histological diagnosis of breast adenocarcinoma, seven cases had previous histological diagnosis of papillary serous adenocarcinoma, ovarian or fallopian tube primary, and five cases were diagnosed histologically with pancreatic adenocarcinoma; the other diagnoses included endometrioid, lung, thyroid and renal cell carcinoma. Of the 30 reactive cases, 18 cases were from pleural effusions, nine cases from ascites, and three cases from pericardial effusions [Table 1].

All 90 cases were previewed for parakeratotic-like cells by the cytology Fellow (LG), two slides of each case and the one with more PK-like cells was chosen for review and confirmation by two board-certified cytopathologists (WR, RMD). Parakeratotic-like cells were defined as small, degenerated cells, with orangeophilic cytoplasm and degenerated, pyknotic nuclei. Any case that had PK-like cells was counted as positive. Cases with cells that had orange cytoplasm, but were *without* degenerated pyknotic nuclei, were counted as negative. Similarly, cases that had cells with eosinophilic cytoplasm were counted as negative regardless of the nuclear structure. These eosinophilic cells often had a blue staining ectoplasmic rim, whereas, the PK-like cells were orange throughout the cytoplasm.

Statistical analysis

The sensitivity, specificity, positive and negative predictive values of cases with PK-like cells for the diagnosis of mesothelioma were calculated as follows:

Sensitivity = True positive / (True positive + False negative)
Specificity = True negative / (True negative + False positive)
Positive predictive value = True positive / (True positive + False positive)
Negative predictive value = True negative / (True negative + False negative)

RESULTS

The two key features of PK-like cells were: pyknotic nuclei and orange cytoplasm [Figure 1]. The PK-like cells were usually smaller than the mesothelial cells, whether benign or malignant. Some mimics were identified, which showed only orange cytoplasm without pyknotic nuclei or eosinophilic (pink) cytoplasm, with or without pyknotic nuclei: these were not counted as PK-like cells [Figure 2].

Table 2 shows the summary of mesothelioma cases with various PK-like cells. Seven of the 30 cases showed numerous (> 5 / slide) PK-like cells, but these were usually less than 1% of the total cell population. Eight cases showed moderate (3 – 5 / slide) PK-like cells that were easily identified. Ten cases had only rare (1 – 2 / slide) PK-like cells. No PK-like cells were identified in five mesothelioma cases and these five cases were either poorly cellular or had papillary structures.

Four of the 30 adenocarcinoma cases (17%) had rare-(two cases)-to-moderate (two cases) PK-like cells [Table 3]. All four positive adenocarcinoma cases were ovarian serous papillary adenocarcinoma, which accounted for 57% (4 / 7) of the serous papillary adenocarcinomas.

The PK-like cells were present in 83% of the mesothelioma cases, 13% of the adenocarcinoma cases and 7% of the reactive cases. In non-mesothelioma cases, when PK-

Table 1: Sites of effusions and diagnoses

	Pleural	*Peritoneal*	*Pericardial*	*Total*
Mesothelioma	24	4	2	30
Adenocarcinoma	20	10	0	30
Reactive mesothelial cells	18	9	3	30

like cells were present, they were usually rare. Table 4 summarizes these findings.

In the present study, the sensitivity of PK-like cells for the diagnosis of mesothelioma was 83%, the specificity was 90%, the positive predictive value was 81%, and the negative predictive value was 84%. When moderate or many PK-like cells were present, the specificity was 97%, but the sensitivity dropped to 50%.

DISCUSSION

Our results showed that the presence of PK-like cells in effusion specimens was highly specific for the diagnosis of MM, especially when the PK-like cells were moderate or numerous. In reactive and adenocarcinoma cases, the PK-like cells were identified in only 7% (reactive) or 13% (adenocarcinoma) of cases, and when present, the PK-like cells were sparse. Interestingly, among adenocarcinomas, the PK-like cells were noted only in ovarian serious papillary adenocarcinoma (SPA) and not in other adenocarcinomas. The PK-like cells are present in four of seven (57%) SPA cases [Table 3]. Of the seven SPA cases, only one case was from a pleural effusion (the others were ascites), while 24 of the 30 mesothelioma cases were pleural effusions [Table 1].

Mesothelioma cases that were negative for PK-like cells were either poorly cellular or had papillary architecture. The total number of PK-like cells rarely exceeded about 1% of the total cellularity; therefore, the probability of identifying PK-like cells in a hypocellular specimen was correspondingly low. However, it was not obvious why PK-like cells were not present in those cases of MM with papillary architecture.

The formation of PK-like cells seems to be a degenerative change in the malignant mesothelial cells. The nuclei are pyknotic, indicating cell death, and the cytoplasm also appears granular and degenerated. We speculate that the PK-like cells may represent a form of apoptosis. Mesothelial cells not only contain keratins, but also when any cell type degenerates, they can stain with Orange G, the component of the Papanicolaou stain responsible for orangeophilia.[10] It is possible that chemicals, such as hyaluronic acid,[12] in the effusion play a role in the development of the PK-like cells in MM. Although squamous metaplasia in the mesothelioma has been described,[13] it seems less likely that squamous metaplastic cells are the small orange cells, based on their rarity and morphology.

Table 2: Summary of PK-like cells in mesothelioma cases

PK-like cells	*Number of MM cases*	*PK-like cells positivity*	*Comment*
Many (>5/slide)	7	23%	Usually <1% of total cells
Moderate (3-5/slide)	8	27%	
Rare (1-2/slide)	10	33%	
None	5	17%	Poor cellularity or papillary MM

Table 3: Summary of PK-like cells in adenocarcinoma cases

Adenocarcinoma	*Number of cases*	*PK-like cells present*	*Positity*
Breast	9	0	0%
Mullerian papillary serous	7	4	57%
Pancreas	5	0	0%
Others	9	0	0%
Total	30	4	13%

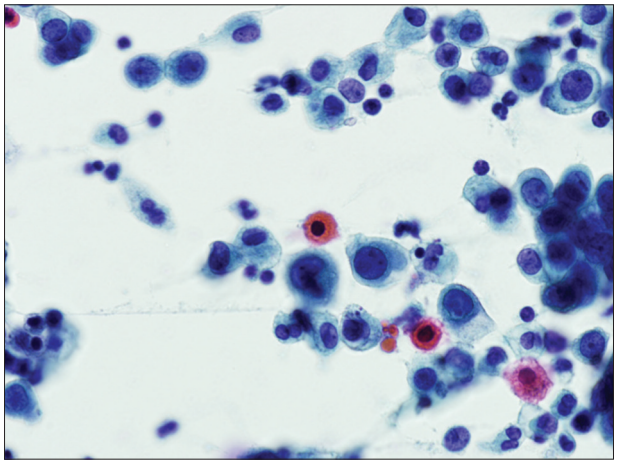

Figure 1: Parakeratotic-like cell. Parakeratotic-like cells are small, degenerated orangeophilic cells with pyknotic nuclei that look like parakeratotic cells in the Pap test (Pap stain, ×400)

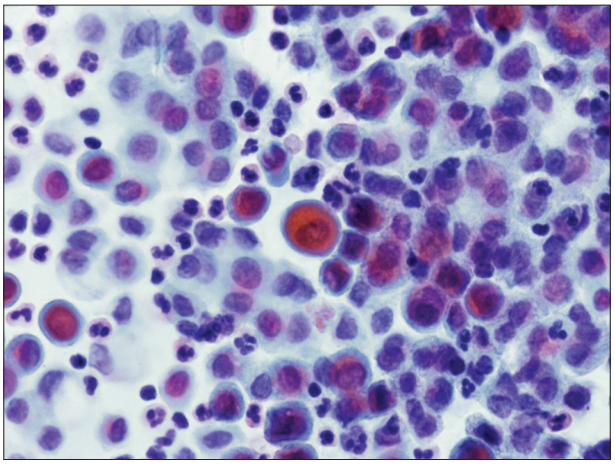

Figure 2: Mimickers of PK-like cells. Cells that had orangeophilic cytoplasm, but lacked degenerated pyknotic nuclei or cells with eosinophilic cytoplasm (regardless of nuclear structure) were not counted as PK-like cells. These mimicker cells typically had a rim of blue staining cytoplasm (Pap stain, ×400)

Table 4: The percentage of positive PK-like cells in all cases

	Number of cases	*PK-like cells present*	*Positivity*	*Comment (number of PK-like cells)*
Reactive Mesothelial Cells	30	2	7%	Rare
Adenocarcinoma	30	4	13%	Rare, only present in papillary serous adenocarcinoma
Mesothelioma	30	25	83%	Absent only in hypocellularity or papillary MM

Cytology plays an important role in the detection of mesothelioma. As patients often present with effusions, examination of the effusion fluid is often the first specimen submitted in the work-up of the mesothelioma. The cytodiagnosis of the mesothelioma can be challenging, because the malignant cells can closely resemble benign, reactive mesothelial cells. Failure to recognize the cells as malignant could lead to a delay in diagnosis if the patient is treated for a benign effusion. Therefore, a morphological clue to diagnosis that is often present in mesothelioma (sensitive) and usually absent in other diseases (specific), such as the PK-like cells described here, could be very helpful in the recognition of malignant mesothelioma. However, the Papanicolaou stain can vary among laboratories, so it is possible that our results are not entirely representative. Therefore, the relation between PK-like cells and MM may need further study in different laboratories, to confirm its usefulness.

In conclusion, our study showed that the presence of PK cells in pleural effusion is a highly specific and moderately sensitive cytological feature for the diagnosis of mesothelioma in the effusion specimens. The major differential diagnosis is serous papillary carcinoma.

COMPETING INTEREST STATEMENT BY ALL AUTHORS

The authors declare that they have no competing interests.

AUTHORSHIP STATEMENT BY ALL AUTHORS

All authors of this article declare that they qualify for authorship as defined by the ICMJE http://www.icmje.org/#author. Each author has participated sufficiently in the study and take public responsibility for the appropriate portions of the content of this article. Each author acknowledges that this final version was read and approved.

ETHICS STATEMENT BY ALL AUTHORS

This study was conducted with approval from the Institutional Review Board.

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EDITORIAL / PEER-REVIEW STATEMENT

To ensure the integrity and highest quality of CytoJournal publications, the review process of this manuscript was conducted under a **double blind model** (authors are blinded for reviewers and vice versa) through automatic online system.

Role of the Pap test for cervical screening in the age of HPV testing and HPV vaccine.

Vaishali Pansare M.D. Medical Director, Chief of Pathology, Beaumont Laboratory Grosse Pointe, MI

Cervical cytology screening has been one of the greatest public health advances of 20th century. In the U.S., a regular screening program of pap smears, with appropriate follow-up, has effectively reduced cervical cancer incidence by up to 80%.1,2 However in recent years, questions have been raised about the limitations of the Pap test. The sensitivity of Pap test is found to be 51%, while the average false negative rate in a meta-analysis was found to be 35.5%. Other limitations of Pap smear are inadequate specimen, interobserver variability and misinterpretations.3,4

Due to these limitations and since most cervical cancers are caused by HPV infection (HPV 16 and 18 alone causing 70% of all cervical cancers), the paradigm of primary prevention is now shifting towards HPV testing and HPV vaccine.

HPV TESTING:

HPV testing has a higher sensitivity in detecting HPV infection. It is more objective and reproducible than cervical cytology. Because it is a molecular test, it is also an expensive test. The American Society for Colposcopy and cervical cytology (ASCCP) recommends HPV testing in a variety of situations, including triage for ASC-US and co-testing with Pap smear in women older than 30 years. HPV testing alone may be an effective large scale method of cervical cancer screening in women over 30 in low resource settings. The HPV test, however, has low specificity and positive predictive value.5 The viral load of most HPV types does not have strong positive predictive value for subsequent CIN3 diagnosis (except HPV 16).6,7 A randomized health services study on cervical cancer screening in Finland showed similar sensitivity of Pap test and HPV testing, but a greater overdiagnosis of CIN3 lesions using HPV testing compared to Pap testing.8 The ASCCP has not yet adopted HPV testing as primary screening method because of concerns for an evidence-based approach to subsequent follow-up.9

HPV VACCINE:

Whereas cytology and HPV testing aim at identifying morphologic abnormalities and HPV infections, HPV vaccines attempt to decrease the rate of infection. Currently there are two HPV vaccines in the market: bivalent vaccine that protects against HPV 16 and 18; and the quadrivalent vaccine against HPV 6, 11, 16 & 18.10 Although these vaccines decrease the rate of most HPV infections, there are about 15 to 20 different HPV types that can cause cervical cancer.

While immunogenicity is maintained for approximately 5 years for the quadrivalent vaccine and approximately 8.4 years for the bivalent vaccine (available follow up data) so far, long term data is yet unavailable but is mandatory to truly understand the duration of efficacy of these vaccines.10 Some studies have documented cross reactivity of the antibodies generated by the vaccines against other HPV types, but this needs to be better studied and analyzed.10 Determining the impact and cost effectiveness of the vaccine will require more data and time.

Current screening recommendations for cervical cancer by the American Cancer Society states: "Women who have had the HPV vaccine should still follow the screening recommendations for their age group."

Thus cervical cytology still forms an integral part of screening program for cervical cancers. It has a high specificity and positive predictive value compared to the HPV test. A new approach is being evaluated in the US, that is primary HPV testing (more sensitive) followed by cytology triage (more specific).5 Clearly more data is needed to see the advantages of this approach.

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Papanicolaou Society of Cytopathology

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1883-1962
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Dear Colleagues:

It is the time of the year for the election of officers.

The executive board has 4 positions open for 2013:

- President-elect
- Treasurer
- Two Members-at-Large

Please check two boxes for the category of Member-at-Large. You can either email (to david.chhieng@yale.edu; the subject should be "PSC election") or fax (203-737-5388) your completed ballot to the PSC Secretary, David Chhieng. **The deadline is Jan 6th 2013.**

President-Elect: *(please check one name only)* [ ] Tarik Elsheikh [ ] Matt Zarka Treasurer: *(please check one name only)* [ ] Britt-Marie Ljung [ ] Helen Wang	Members at large: *(please check no more than 2 names)* [ ] Beatrix Cochand-Priollet [ ] Guido Fadda [ ] Fernando Schmitt [ ] Laura Tabatabai [ ] Philippe Viehl (2nd term)

Candidates for President Elect 2013

Tarik Elsheikh, MD

Dr. Elsheikh is currently the Anatomic Pathology Medical Director for the Cleveland Clinic Laboratories. For the preceding 14 years, he was a practicing partner and Director of Cytology at PA Labs/Ball Memorial Hospital, Muncie, Indiana. Prior to that, he was an assistant professor at East Carolina University for approximately five years. He completed his Anatomic/Clinical pathology residency training at East Carolina University, and Cytology Fellowship at William Beaumont Hospital.

Dr. Elsheikh has authored over 50 papers and nine book chapters, and presented over 100 lectures and workshops at national and international meetings, including ASC, USCAP, ASCP, ECC, and IAP. He sits on the editorial boards of Diagnostic Cytopathology and Cancer Cytopathology, and is a reviewer for a number of other journals.

Dr. Elsheikh has been active in Papanicolaou Society of Cytopathology (PSC) for many years. He was elected to two terms on the executive board, and served on several committees including Cytopathology Practice Guidelines Task Force, Cytopreparatory and Ancillary Techniques, Scientific Program Committee, International Programs and Relations Committee. In addition, he chaired the Professional Issues Task Force.

Dr. Elsheikh has also been very active in other professional pathology societies. In USCAP, he sits on the Educational committee, Foundation committee, Innovation committee, and is chair-elect of the USCAP Foundation Board. In ASC, he serves on the executive board, and has chaired the Productivity and QA in Automated Gynecologic Screening Task Force and the ASC Clinical Practice committee. Locally, Dr. Elsheikh has served on the Board of Directors of the Delaware county Chamber of Commerce, was Vice-Chair for Public and Government Relations, and also served on the Board of Directors of several charitable organizations.

In summary, Dr. Elsheikh has demonstrated skills in leadership and consensus building, evidenced by his many local and national roles. If elected, he would bring a unique perspective and wide range of experiences to the PSC presidency. He believes that collaboration with other national and international societies is necessary in advancing the PSC mission and vision. Dr. Elsheikh is committed to PSC's mission of bridging the gap between surgical pathology and cytology, and is dedicated to promoting quality patient care through education and patient advocacy.

Matthew A. Zarka, MD

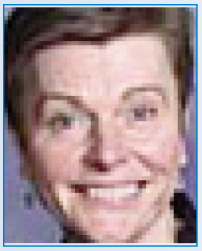
Dr. Matthew A. Zarka obtained his medical degree from St. Louis University and completed his residency training in Anatomic Pathology at University of California San Francisco in 1990. After fellowship training in Cytopathology at UCSF in 1991, he began his pathology practice in Stockton, CA. He returned to academic medicine in 1994, joining the faculty at the UVM College of Medicine in Burlington, VT. At UVM he served as Director of Cytopathology and Anatomic Pathology until 2000. Dr. Zarka is currently a Consultant in Laboratory Medicine and Pathology at Mayo Clinic Arizona in Scottsdale, Arizona and serves as the Division Chair of Anatomic Pathology.

Dr. Zarka studied fine needle aspiration biopsy at the Karolinska Institute with Dr. Torsten Lowhagen. He has served on the Technical Advisory Group on Comprehensive Cervical Cancer Control at the World Health Organization in Geneva, Switzerland and reviews original submissions for several medical journals including Cancer Cytopathology, Diagnostic Cytopathology, and Archives of Pathology and Laboratory Medicine. He has given numerous invited presentations and microscope workshops on the interpretation of fine needle aspiration biopsy and GYN cytology, nationally and internationally. He has served as Medical Director of Grounds for Health, a non-profit organization promoting cervical cancer screening in rural areas of Mexico and Central America, and is a proponent of traditional cytologic screening for cervical cancer in developing countries. He has participated in FNA tutorials with Dr. Andrew Field from Sydney, Australia in Sub Saharan Africa under the auspices of the Papanicolaou Society, and was awarded the 2010 Humanitarian Grant from the College of American Pathologist Foundation for this effort. He currently serves as a board member of the College of American Pathologists Foundation. He is the current Chair of the Scientific Program Committee of the Papanicolaou Society of Cytopathology. He is a strong advocate of charitable support for education, research, and humanitarian programs related to pathology.

As President of the PSC, Dr. Zarka will advocate continued standardization of diagnostic terminology in the field of Cytopathology, increased collaboration with US based and international pathology societies, and continued PSC sponsored cytology teaching projects in the developing world.

Dr. Zarka is a strong advocate of charitable support for education, research, and humanitarian programs related to pathology. He will continue to advocate that the PSC expand its influence on an international level and support philanthropic projects in the developing world.

Candidates Treasurer 2013



Britt-Marie Ljung, MD

Dr. Britt-Marie E. Ljung obtained her medical degree from the Karolinska Institute, completed two years of cytopathology fellowship at the Karolinska Hospital in Stockholm under the leadership of Torsten Lowhagen and residency training in anatomic pathology at UCLA. She has served on the faculty at University of California at San Francisco since 1983 and is currently director of the cytopathology fellowship, Director of the Division of Cytopathology and vice chair of the department of Pathology.

Dr. Ljung has been focused on the teaching and practice of cytology throughout her career and has lectured widely and published extensively in this field. She has championed improvement of specimen procurement as a key element of optimizing accuracy in FNA cytology and designed, wrote and created the widely used video, later converted to DVD, on FNA sampling and preparation technique used in many training programs worldwide and now available free on the internet. She was one of four pathologists working with CAP to create/write the AP3 program/course on Ultrasound Guided FNA for pathologists. The course is currently offered 2-3 times yearly and Dr Ljung continues as an active faculty member in this program. She received the the CAP Excellence in Education Award and the Yolanda Oertel award for the Interventional Cytopathologist of the year from the Papanicolaou Society in 2010.

She is a member of the editorial boards of Cancer Cytopathology, Diagnostic Cytopathology and Acta Cytologica and serves as an ad hoc reviewer for a number of other journals.

Recently Dr. Ljung has turned a significant part of her focus toward the teaching of cytology outside the US in underserved areas of the world. Cytology in her view is ideally suited to low resource areas because it can be practiced with very limited material resources. However training of practitioners of cytopathology is crucial for its success in any setting. Dr. Ljung has made two visits to Ghana as part of Breast Health Global Initiative during 2010. Currently she is contributing materials and ongoing advice for a project introducing FNA of breast lesions in rural, underserved areas of Peru. This project is sponsored by PATH, Gates foundation.

Dr. Ljung is currently serving as an Executive Board member-at-large and chair on the Ultrasound FNA committee for the Papanicolaou Society of Cytology. In the past she has served as chair of the awards committee.

Dr. Ljung has long and extensive experience in the practice and teaching of cytopathology, is passionate about fostering the highest standards and pairing minimally invasive cytology/ small biopsy sampling with modern, evolving molecular technology allowing diagnostic, prognostic and predictive information in high resource settings. She also, in parallel, is committed to teaching the practice of cytopathology in low and middle resource settings in order to provide much needed accurate and timely diagnostic services and build a solid platform for development of efficient health care for all people.

Dr Ljung is interested in continuing her service to the Society by taking on the role as treasurer. If elected she will work closely with Dr E. Suba, who is currently serving as treasurer, in order to insure a smooth transition.

Helen H. Wang, MD

Dr. Wang is a graduate of National Taiwan University, College of Medicine, in Taipei, Taiwan. Subsequent to her medical education, she obtained MPH and DrPH degrees in Epidemiology and Biostatistics from Harvard University, School of Public Health. Having served for two years as an Epidemiologist in the Cancer Center and an Assistant Professor in Community and Family Medicine, both at Duke University in Durham, NC, she started her residency training in Anatomic Pathology. Following completion of her residency, she developed an interest and expertise in Gastrointestinal Pathology and Cytopathology. She has been the Director of Cytopathology for the last twenty years in the Department of Pathology at the Beth Israel Deaconess Medical Center in Boston, MA, where she completed her residency training and has been on staff since. She has published extensively on GI pathology/cytology and FNA cytopathology, especially thyroid FNA. She has also given courses/workshops at annual meetings of United States & Canadian Academy of Pathology and American Society for Clinical Pathology and has been an invited speaker on numerous occasions, including a speaker at the Harvard Medical School-sponsored Advances in Cytology CME course since the inception of the course in 1989. She has trained many fellows in cytopathology, some of whom are in leadership positions in pathology. She is an experienced cytopathologist and surgical pathologist, an effective administrator and a committed educator. She holds an academic appointment of Associate Professor of Pathology at Harvard Medical School. She has been a member of the Papanicolaou Society of Cytopathology since 1994.

Candidates for Executive Board Member-at-large 2013

Beatrix Cochand-Priollet

Dr B Cochand-Priollet has been an Associate Professor (Maître de conférences des Universités-Praticien Hospitalier) at the Assistance Publique-Hôpitaux de Paris-Université Paris 7, in France since 1982. She received her training in pathology and cytopathology at the same University, Paris 7, from 1979 to 1982 and was rapidly in charge of Papsmears as well as FNAs cytology. She is responsible for the Unit of Cytopathology in the department of Pathology in Lariboisière Hospital, Paris. Her major interests are in Papsmears and in Fine Needle Aspiration Cytopathology, especially of the thyroid. In parallel, she is in charge of recruitment for uropathology. She is currently the president of the SFCC (French Society of Clinical Cytology) and as such, she will be hosting the next International Congress of Cytopathology from May 26th-30th 2013 in Paris. Concerning her teaching on Cytopathology, she is responsible for the *Interuniversity diploma of Cytopathology* in Paris, for cytopathology training in the *pathology specialty Inter-region Ile de France* and for continuing education at the SFCC. Concerning "Quality Assurance" she is one of the founding members of the French National Agency of Quality Assurance (1990) and responsible, since the beginning, for all the diagnostic tests of the *Papsmears committee* transformed into the *Cytopathology committee* since 2007.

She belongs to the working group of the EFCS, co-chairing the scientific committee of the EFCS with Fernando Schmitt. Being a member of the editorial management Board of the *Annales de Pathologie* and as Associate-Editor of *Cytopathology,* she also has some editorial activities. Dr B Cochand-Priollet has authored 127 papers and 10 book chapters, has lectured extensively and directed courses, slide seminars and workshops both nationally and internationally.

Guido Fadda, MD

Dr. Fadda took the M.D. degree at the University of Cagliari and completed his residency in Pathology at the Catholic University of Rome in 1990. He is Assistant Professor of Pathology (1997) and Director of the Cytopathology Laboratory (2010) of the "Agostino Gemelli" School of Medicine and Hospital of Rome. He is also senior staff pathologist in the Division of Anatomic Pathology and Histology of the Catholic University of Rome and his main interests are endocrine, GU, breast and cardiac pathology, cytopathology. Since 1987 he has started performing fine-needle aspiration biopsies in the outpatient office of his University hospital and attended in 1991 the Course on Clinical Aspiration Cytology under the direction of Dr. Lowhagen in Stockholm (Sweden).

Dr. Fadda attended the Departments of Anatomic Pathology and Laboratory Medicine of the Hospital of the University of Pennsylvania at Philadelphia (U.S.A. - 1994) and of the Univ. of Toronto Health Network (Canada - 2000) He is Professor of Anatomic Pathology, Histology and Cytology in different specialty diploma programs of the Catholic University of Rome and has been responsible of the scientific committee of 8 international courses on thyroid pathology and cytopathology and of the meeting "Updates in urinary tract cytology" held at the Catholic University of Rome (1996-2011).

Dr. Fadda has been invited as speaker, panelist and chairman in several national and international meetings, particularly focused on thyroid cytology and endocrine pathology, most of them held in the U.S.A., Canada and Europe. He is member of the Italian Society of Pathology and Cytopathology (SIAPEC/IAP), the United States and Canadian Academy of Pathology (USCAP), the Endocrine Pathology Society (EPS) and the International Academy of Cytology (IAC). He is also honorary member of the Nikolaj Pirogov's Academy of Surgery (St. Petersburgh - Russian Federation) and member of the editorial boards of the journals "Acta Cytologica", "Endocrine Pathology" and "Cytojournal" and of the Italian Society of Pathology official journal "Pathologica"

In 2008 Dr. Fadda joined the international Pathology Panel of the Chernobyl Tissue Bank (www.chernobyltissuebank.com), sited in London (UK), which is deputed to review, classify and keep under review the protocol of collection and storage of tumors arising in patients exposed to the Chernobyl accident of 1986. He is member of the Italian committees for the Classification of Thyroid Lesions on Fine-Needle Aspiration Cytology (2007-2012) and for the development of non-gynecologic cytology (2008-2012) and is author of almost 200 articles among which about 100 published in peer-reviewed journals.
Since 2008 Dr. Fadda has been serving as member of the Scientific Program Committee of the Papanicolaou Society of Cytopathology. If elected he will work to promote the principles of the PSC in the world and to develop the application of new techniques for increasing the efficacy of the cytopathology.

Fernando Schmitt, MD, PhD, FIAC

Dr. Schmitt is a Professor of Pathology at the University of Porto, Portugal and serves as the Medical Director of the Unit of Pathology at Institute of Pathology and Immunology of Porto University (IPATIMUP). He was born in Santa Maria Brazil in 1959 and received his medical degree from the University of Santa Maria (Brazil) in 1983. Fernando served his pathology residency at the Medical Faculty of Botucatu, São Paulo and performed a fellowship in Clinical Cytology at Karolinska Medical Hospital, Stockholm under the supervision of Torsten Lowagen and Lambert Skoog. Backing to Brazil, he developed an aspiration clinic at University Hospital in Botucatu and earned his PhD in Pathology in 1990.

After ten years in the University of São Paulo, Fernando moved to Portugal in 1993. He established a research group in breast pathology and a FNA service at IPATIMUP. As Director of the Unit of Pathology he prepared this Unit and got the CAP accreditation making the only anatomic pathology lab accredited by CAP in Iberia peninsula. Dr. Schmitt holds 12 national and international society memberships, including FIAC obtained after examination in 2006.

Dr. Schmitt has authored more than 369 papers in peer-review journal and 23 book chapters and has presented widely on cytology and breast cancer subjects. He serves as Associate Editor of Diagnostic Cytopathology, Acta Cytologica and BMC Cancer and belongs on the Editorial board for a number of journals (Breast Cancer Research, Cytopathology, Journal of Clinical Pathology, Pathology Research and Practice, Virchows Archives, among others). Dr. Schmitt has served on various national and international committees of Pathology and Cytology Societies. He was chairman of the Working Group of Cytopathology of the European Society of Pathology (ESP) during six years, President of the Portuguese Society of Cytology during four years, scientific director of the Brazilian Society of Cytology for four years and President of the European Federation of Cytology Societies for four years. Actually, he is General Secretary of the International Academy of Cytology (IAC). He organized several slide seminars, courses and other activities related to cytology and breast pathology in the last European congresses of Pathology and Cytology and were the President of the 35th European Congress of Cytology realized in Lisbon in September 2009.

His main areas of research are molecular markers in cytology, cell adhesion and invasion in breast cancer as well as the study of therapeutic targets and mechanisms of resistance. He was recently awarded as Educator of the Year 2011 by the Papanicoloau Society of Cytology (USA).

Laura Tabatabai, MD

Dr. Laura Tabatabai joined the faculty at University of California San Francisco in 2001 where she is presently Associate Professor of Clinical Pathology and serves as the Divisional Chief of Cytopathology and co-Director of the surgical pathology services at SFVAH. She is actively engaged in Cytology and Surgical Pathology services at SFVAH and Moffitt Hospital, both teaching hospitals of UCSF medical Center.

Dr. Tabatabai completed her residency training at Harvard Medical School-Beth Israel Deaconess Medical Center in Boston, MA and her cytopathology fellowship at M.D. Anderson Cancer Center - University of Texas in Houston, TX. She received her medical degree from University of Missouri, in Columbia, MO.

Dr. Tabatabai is an active member of the Papanicolaou Society, the American Society of Cytopathology, the United States and Canadian Academy of Pathology, and the College of American Pathologists where she currently serves as a member of the Cytopathology Resources Committee and, along with other members, is responsible for development and maintenance of educational content in a multitude of national and international Cytopathology course offerings.

In keeping with her interests and passion for education, Dr. Tabatabai has successfully served as the course Chair of the UCSF Current Issues Cytology Seminar (previously combined UCSF/Stanford seminar) since 2004 for which she holds the primary responsibility for planning, organizing, and implementing the Annual course.

In 2009, she accepted the responsibility to co-chair the UCSF Current Issues in Anatomic Pathology annual course. Her role in this position involves identification of educational and practice gaps in various pathology practice settings as well as development and evaluation of the course educational activity with CME and SAMs offerings in the ever-changing and challenging practice of pathology.

In 2010, Dr. Tabatabai was invited to join the Education Committee of the California Society of Pathologists (CSP), the second largest state pathology society in the nation. In this capacity she serves in the planning and implementation of the annual conference held by the Society, as well as in representing the educational concerns of pathologists, pathologists in training, and technologists at a regional and national level through communication with the CSP board of directors.

In the research arena, Laura has presented widely at national and international meetings. Her primary focus of research interest is aimed at investigating the role of micro-RNAs in the progression and metastasis of genitourinary cancers and the application of specific histological and cytological diagnostic criteria and molecular and immunohistochemical ancillary techniques to improve cytological diagnosis.

She is currently co-investigator on several NIH and DOD-funded research grants and has published numerous original peer reviewed articles in leading pathology and medical journals. She serves as ad hoc reviewer for original submissions to journals including Acta Cytologica, European Urology, and Experimental and Molecular Pathology, and has been invited to present at numerous conferences nationally and internationally.

Laura's guiding philosophy for her work in Pathology societies has always been 'the Whole is greater than the sum of its parts' (Aristotle, Metaphysica) and therefore, she truly believes that the collaborative effort of all members of a society working together as a team in a synergistic fashion makes great achievements possible.

She is committed to advocating the educational mission of the PSC and seeks your vote and support for the opportunity to serve to her fullest capacity in promoting, planning and development of PSC educational activities and global outreach policies for the next generation of pathologists and clinicians, and in advancing the leadership role of the PSC as a premiere national and international educational society.

Philippe Vielh, MD, PhD

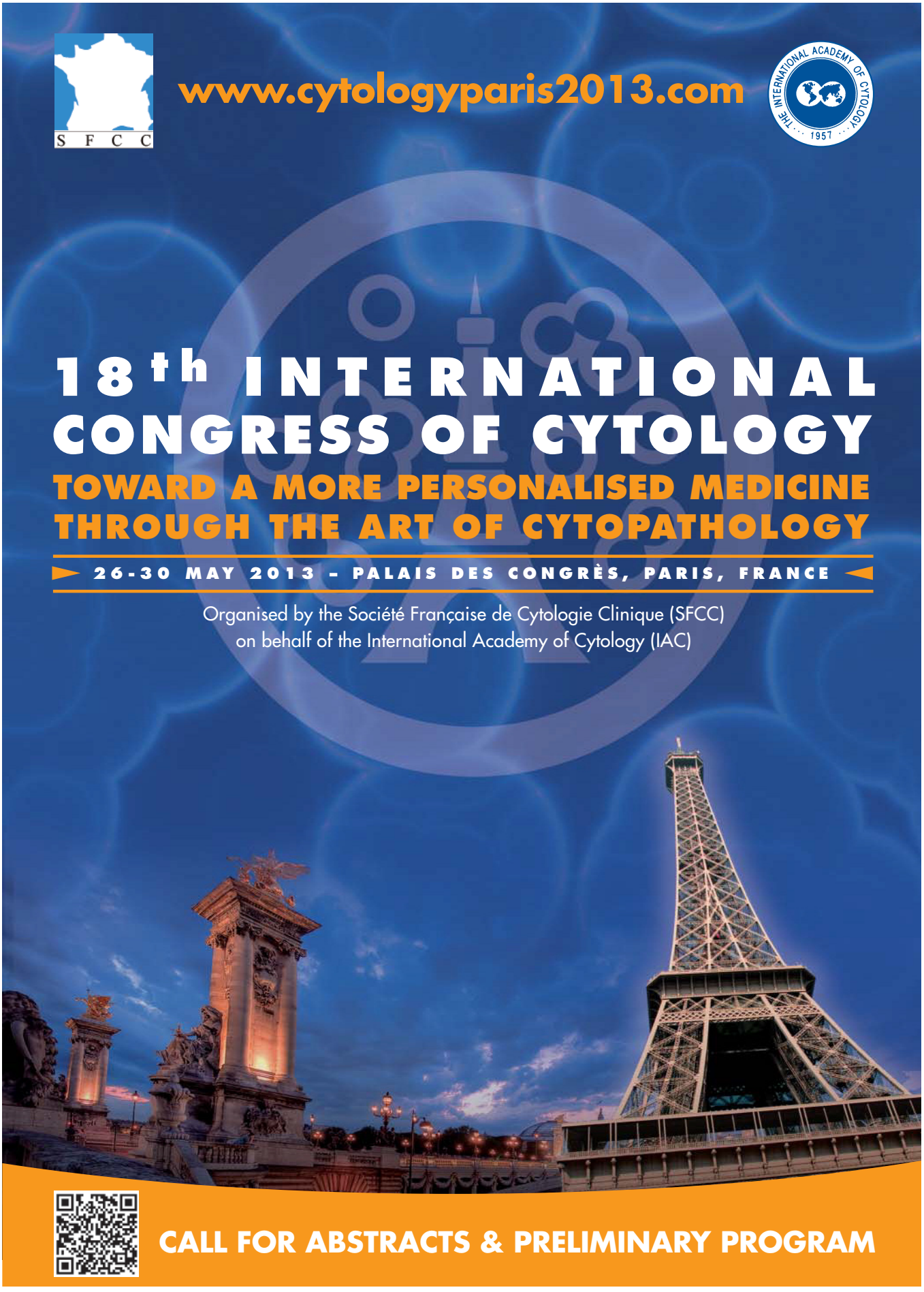
Philippe Vielh was born in the south of France. He graduated as an MD and a board-certified pathologist from the Faculty of Medicine in Paris (France), has a PhD in immunology from the Institut Pasteur (Paris) and a "habilitation à diriger des recherches" from the faculty of Sciences (Paris).

He has been heading the cytopathology unit at Institut Curie (Paris, France) for 13 years, then moved to the Institut de Cancérologie Gustave Roussy (Villejuif, France) where he is director of cytopathology since 2003, head of the histocytopathology unit (translational research laboratory) since 2007 and head of the biobank since 2011.

He is particularly interested in the study of genomics and transcriptomics of breast and thyroid follicular tumors and is the author or the co-author of more than 230 articles in peer-reviewed journals, 15 book chapters and 4 books.

He is the recipient of the 2007 L.C. Tao "Educator of the Year" award given by the Papanicolaou Society of Cytopathology.

President of the French Society of Cytology (SFCC) during 9 years (1996-2006), he chaired the 31st European Congress of Cytology in 2005 (Paris, France) and served as Secretary General of the European Federation of Cytology Societies (EFCS) from September 2005 till October 2012. He is President-elect of the International Academy of Cytology (IAC) and is organizing the 2013 IAC meeting (May 26-30) in Paris, France.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REGISTRATION FORM

Please return this form as soon as possible and **before 26th March**, 2013 to benefit from the **early registration fee**, to:
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For an easier and faster registration, you may also register online at: **www.cytologyparis2013.com**

A PARTICIPANT (please write in BLOCK LETTERS)

☐ Pr ☐ Dr ☐ Mr ☐ Mrs ☐ Ms

LAST NAME/FAMILY NAME: _____

FIRST NAME: _____

INSTITUTION/COMPANY: _____

DEPARTMENT: _____

STREET / PO. BOX: _____

POSTAL CODE: _____ CITY/STATE: _____

COUNTRY: _____ EMAIL: _____

PHONE: _____ FAX: _____

☐ I do NOT wish for my name to appear on the participants list distributed to attendees and sponsors

B REGISTRATION FEES (All rates are in euros and include 19.60% VAT at date of printing – November 2012)

REGISTRATION CATEGORIES	EARLY REGISTRATION Before March 26th 2013	EARLY REGISTRATION From March 26th to May 25th 2013	ON-SITE REGISTRATION As from May 26th 2013
IAC Member, please specify: ☐ MIAC – ☐ FIAC – ☐ CMIAC ☐ CFIAC – ☐ PMIAC	☐ 500€	☐ 600€	☐ 700€
SFCC Member	☐ 500€	☐ 600€	☐ 700€
Non Member	☐ 620€	☐ 720€	☐ 820€
Cytotechnologist Participation to ENTIRE congress	☐ 400€	☐ 500€	☐ 600€
Cytotechnologist – DAY FEE* (Monday or Tuesday or Wednesday) 1 ticket only is possible*	MONDAY ONLY ☐ 200€ or TUESDAY ONLY ☐ 200€ or WEDNESDAY ONLY ☐ 200€	MONDAY ONLY ☐ 200€ or TUESDAY ONLY ☐ 200€ or WEDNESDAY ONLY ☐ 200€	MONDAY ONLY ☐ 200€ or TUESDAY ONLY ☐ 200€ or WEDNESDAY ONLY ☐ 200€
Junior participant (UNDER 35 years)**	☐ 200€	☐ 250€	☐ 350€
			TOTAL A: .....€

*This day fee allows cytotechnologists to attend the congress for just 1 day and they can select the day of their preference. It is NOT permitted to cumulate day fee tickets; it is possible to purchase 1 ticket only.
** Copy of ID card will be required upon registration as proof of age.

C OPTIONAL SESSIONS (All rates are in euros and include 19.60% VAT at date of printing – November 2012)

You need to register to the congress in order to be able to sign up to the optional sessions.

- Optional session reservations will be confirmed on a first come first served basis upon availability and after payment clearance.
- Please remember that these sessions have limited number of seats. Book early to avoid disappointment!
- On site availability may not be guaranteed by the Organizers.

IMPORTANT NOTE for CYTOTECHNOLOGISTS DAY-FEE participants: they can ONLY reserve workshops / video-microscopic tutorials / meet the expert breakfasts which are held on the selected registration day. They cannot book optional sessions held on days not corresponding to their selected registration day.

OPTIONAL SESSIONS	EARLY REGISTRATION Before March 26th 2013	EARLY REGISTRATION From March 26th to May 25th 2013	ON-SITE REGISTRATION As from May 26th 2013
Workshops /Video-Microscopic Tutorials (unit price)	**70€**	**70€**	**70€**
Meet the Expert Breakfasts (unit price)	**50€**	**50€**	**50€**

Please select the optional sessions you wish to reserve:

• ME = Meet the Expert breakfast (50€ per ME) • WS = Workshop (70€ per WS) • VMT = Video-microscopic tutorials (70€ per VMT)

MONDAY 27th MAY 2013

07:00 – 08:00 ☐ ME01 or ☐ ME02	**08:00 – 09:30** ☐ WS01 or ☐ WS02 or ☐ VMT01	**10:00 – 11:30** ☐ WS03 or ☐ WS04 or ☐ VMT02
13:00 – 14:30 ☐ WS05 or ☐ WS06 or ☐ VMT03	**14:30 – 16:00** ☐ WS07 or ☐ WS08 or ☐ VMT04	**16:30 – 18:00** ☐ WS09 or ☐ WS10

Subtotal Monday .....€

TUESDAY 28th MAY 2013

07:00 – 08:00 ☐ ME03 or ☐ ME04	**08:00 – 09:30** ☐ WS11 or ☐ WS12 or ☐ VMT05	**10:00 – 11:30** ☐ WS13 or ☐ WS14 or ☐ VMT06
13:00 – 14:30 ☐ WS15 or ☐ WS16 or ☐ VMT07	**14:30 – 16:00** ☐ WS17 or ☐ WS18 or ☐ VMT08	**16:30 – 18:00** ☐ WS19 or ☐ WS20

Subtotal Tuesday .....€

WEDNESDAY 29th MAY 2013

07:00 – 08:00 ☐ ME05 or ☐ ME06	**08:00 – 09:30** ☐ WS21 or ☐ WS22 or ☐ VMT09	**10:00 – 11:30** ☐ WS23 or ☐ WS24 or ☐ VMT10
13:00 – 14:30 ☐ WS25 or ☐ WS26 or ☐ VMT11	**14:30 – 16:00** ☐ WS27 or ☐ WS28 or ☐ VMT12	**16:30 – 18:00** ☐ WS29 or ☐ WS30

Subtotal Wednesday .....€

THURSDAY 30th MAY 2013

07:00 – 08:00 ☐ ME07 or ☐ ME08	**08:00 – 09:30** ☐ WS31 or ☐ WS32 or ☐ VMT13	**10:00 – 11:30** ☐ WS33 or ☐ WS34 or ☐ VMT14

Subtotal Thursday .....€

TOTAL C: .....€

D NETWORKING & CULTURAL PROGRAM (All rates are in euros and include 19.60% VAT at date of printing – November 2012)

For more details, please refer to the program or website.

SUNDAY 26th MAY

OPENING NETWORKING SESSION – Palais des Congrès (included in registration fees) ☐ YES ☐ NO

MONDAY 27th MAY

EVENING PROMENADES

Le Marais: booking code EP1	EP1	☐ 20€	per ticket x N° ..... = ...€
Montmartre: booking code EP2	EP2	☐ 20€	per ticket x N° ..... = ...€
Saint-Germain des Près: booking EP3	EP3	☐ 20€	per ticket x N° ..... = ...€

WEDNESDAY 29th MAY

CONGRESS DINNER – Théâtre du Merveilleux

Congress registered participant ticket	☐ 100€	
Additional ticket(s)	☐ 110€	per ticket x N° ..... = ...€

TOTAL D: .....€

E ACCOMMODATION (please refer to the hotel list in programme or website)

HOTEL RESERVATION DEADLINE: April 26th, 2013

After this date, any reservation requests received are subject to room availability and cannot be guaranteed by the Organizers.

Arrival: ..... /05/ 2013 **Departure:** ..... /05/2013

HOTEL CHOICE (PLEASE INDICATE BELOW)	ROOM TYPE	DEPOSIT (= ALL NIGHTS)
1st choice	☐ single ☐ double ☐ twin	..... €
2nd choice	☐ single ☐ double ☐ twin	..... €

TOTAL E: .....€

F TRANSPORT

• TRAIN DISCOUNT (French railways only): ☐ I wish to receive ..... train coupon(s)

• AIRLINE DISCOUNT : please visit www.airfranceklm-globalmeetings.com

G PAYMENT

TOTAL AMOUNT TO BE PAID (B + C + D + E) = ...€

• by check payable in Euro (€) in France to the order of ICC 2013 c/o MCI France

• by bank transfer in Euro (€) to the order of ICC 2013 c/o MCI France to:
Bank Name : Le Crédit Lyonnais - Direction Entreprise - 19 boulevard des Italiens – 75002 Paris
Bank code: 30002 – Bank sort code: 05666 – Account N° 0000060133P - Key 15 - IBAN: FR91 3000 2056 6600 0006 0133 P15 – BIC CRLYFRPP
Copy of the bank transfer must be sent along with the registration form. Do not forget to mention on the bank transfer order the name of the person you are paying for. The Organizers will not absorb bank charges.

• by credit card : VISA / MASTER / EUROCARD / AMERICAN EXPRESS (no other cards accepted):
I authorize the Congress Office to debit my card for the amount indicated here above:

Number: |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__| Expiry date: |__|__|/|__|__|

Card Verification Code (3 digits on back of Visa/Mastercard, 4 digits on front of AMEX): |__|__|__|__|

CARDHOLDER NAME: ..... Signature (Compulsory): .....

☐ I hereby accept all registration and hotel reservation conditions and cancellation policy of ICC 2013 and agree for the payment corresponding to my requests. Please refer to program and website for details on registration / reservation conditions and cancellation policy of ICC 2013. Forms which have not been signed and dated will NOT be processed.

Date: .....

Signature: .....

PSC Membership Application Form

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George N. Papanicolaou
1883-1962
http:///www.papsociety.org

Dear Colleague:

It is the time of year again to renew your PSC membership.

We have a wonderful year planned for 2012, which includes 2 issues of FOCUS and the Evening Companion Meeting at the USCAP in Vancouver BC Canada which will begin at 7:00 PM on March 17th 2012. The theme will be "**Diagnosing lung carcinoma in the era of personalized medicine: clinical, pathologic, and molecular aspects.**" On the same day, the PSC will also have an afternoon session "Cells without borders" organized by PSC International Relations Committee. Please see the accompanying flyer for more details.

*****Please make sure you pay your dues by January 30, 2012.*****

This will assure you of mailings of all our information for the coming year and your subscription to DIAGNOSTIC CYTOPATHOLOGY.

You can renew your membership online. The address is: http://www.papsociety.org/members.html

If you prefer, you may return this form, along with your check or credit card information, by mail or fax to:

Eric Suba, M.D.
2295 Vallejo Street #508
San Francisco, CA 94123
Fax: 415-833-3871

Check the appropriate box:

- □ $160: Practicing MD or PhD in USA or Mexico
- □ $170: Practicing MD or PhD in Canada
- □ $200: Practicing MD or PhD in other countries outside the USA
- □ $25: Resident/Fellow or Graduate Student (does not receive DICY)
- □ $25: Emeritus or Retired (does not receive DICY)

MAKE CHECKS PAYABLE IN U.S. DOLLARS TO:
Papanicolaou Society of Cytopathology
CREDIT CARD PAYMENTS ON MASTERCARD OR VISA ACCEPTED

NAME _____

MC/VISA NUMBER _____

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San Francisco CA 94123 * e-mail: eric.suba@kp.org

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Membership..

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- Representation at the **USCAP**
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By these letters let it be known that

Join today by downloading and filling the membership form from http://www.papsociety.org/docs/09/pscapp2009.pdf

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YEAR

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Martha Bishop Pitman, M.D.
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(Please forward this to you colleagues)

Eric Suba, M.D.
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