cases, whereas the expression levels in benign thyroid lesions were low or less. Both in immunohistochemical and immunocytochemical analysis using CD26/DPPIV monoclonal antibody, papillary and follicular carcinoma was positively stained in almost all cases, and adenomatous goiter and Graves’ disease showed a low positive rate. Follicular adenomas responded to this antibody in a relatively high incidence. Among them, follicular adenoma with incomplete capsular invasion had a higher positive rate (50%, 4 of 8) than follicular adenoma without capsular invasion (9.6%, 5 of 52). The result suggests that the former have a higher potential to become malignant. Northern blot and reverse transcriptase-polymerase chain reaction (RT-PCR) analysis revealed that CD26/DPPIV is a more specific marker for papillary carcinoma and follicular carcinoma. Overall, the results of activity staining, immunostaining mRNA and RT-PCR analysis of CD26/DPPIV were well correlated with each other. Southern blot studies showed no gene amplification or major translocation of the CD26/DPPIV gene. Based on these studies, ectopic expression of CD26/DPPIV in differentiated thyroid carcinomas is thought to be mainly caused by increased CD26/DPPIV mRNA expression. In conclusion, staining activity of CD26/DPPIV is a simple, but specific method that should be added to the cytologic and pathologic examinations in order to distinguish the differentiated thyroid carcinomas from the benign thyroid diseases. Furthermore, CD26/DPPIV may be a useful marker for evaluating the aggressiveness and prognosis of thyroid tumor, because CD26/DPPIV seems to be newly expressed in the differentiated carcinoma and subsequently down-regulated during dedifferentiation.

From the University of Texas M.D. Anderson Cancer Center, Houston, Texas, U.S.A.

**WK-12** BREAST CYTOPATHOLOGY: FINE NEEDLE ASPIRATION CYTOLOGY OF MAMMOGRAPHIC MICROCALCIFICATIONS WITH EMPHASIS ON THE CYTOLOGIC FEATURES OF DUCTAL CARCINOMA IN SITU

Torill Sauer

The workshop consists of approximately 300 fine needle aspiration cytology (FNAC) cases of histology-verified ductal carcinoma in situ (DCIS) of the breast or DCIS with an additional invasive component. A few cases of atypical ductal hyperplasia, atypical lobular hyperplasia and benign microcalcifications are also included. About 80% of the DCIS cases are high grade.

From Ullevaal University Hospital, Oslo, Norway.

**AWARD LECTURES**

**CYTOTECHNOLOGIST OF THE YEAR 2006**

**AW-02** LABORATORY UTILIZATION AND SERVICES IN RESOURCE-LIMITED SETTINGS

T. Somrak

One of the most important elements in health care delivery is the use of laboratory test results. Laboratory test results are an integral part of a treatment plan because they diagnose as well as monitor disease and disease progression. The laboratory provides information to clinicians in making decisions about treatment regimens. A commitment to regularly use the clinical laboratory is an important way to enhance and improve health care delivery systems. However, in resource-limited settings, syndromic diagnosis of diseases without laboratory confirmation has been an accepted standard of care that often leads to misdiagnosis and negative consequences. Laboratory capacity is inadequate because of limited resources, both human and material, and is a barrier to proper utilization of the clinical laboratory. Most laboratories in developing countries lack the access to the proper tools such as equipment, reagents and supplies, as well as lack access to education opportunities for their staff. In resource-limited countries, accurate diagnoses and the subsequent management of diseases are compromised by the lack of sustained training for pathologists and other laboratory professionals. Laboratories services will have an increasingly important role in improving the quality and effectiveness of patient care. Governmental and nongovernmental organizations support resource-limited countries and their laboratorians by developing training tools and providing technical assistance, to deliver and sustain education and knowledge transfer to laboratory personnel. These strategies are intended to assist countries in scaling up the laboratory capacity by ensuring consistency and quality in the implementation of laborato-
ry practices. Enhancing the capacity of laboratories in resource-limited countries will more effectively confront the under utilization of the clinical laboratory and result in more effective and systematic laboratory systems. This presentation will discuss some of the initiatives developed by various global agencies to improve diagnostic capability and quality testing in developing countries.

From the American Society for Clinical Pathology, Chicago, Illinois, U.S.A.

CYTOTECHNOLOGIST OF THE YEAR 2007

AW-03 TRAINING PROGRAM FOR CYTOTECHNOLOGISTS IN JAPAN: TRACING THE HISTORY AND CONSIDERING FUTURE PROSPECT

M. Tsuzuku

The history of training of cytotechnologists in this country dates back to 1962 when a study group composed primarily of gynecologists, a precursor of the Japanese Society of Clinical Cytology (JSCC), was led by the late Drs. Kazumasa Masubuchi and Junichi Mizuno. In 1965, the Japanese Association for Maternal Welfare kicked off a campaign to “Protect Women from Cancers” and conducted mass screening of uterine cancers by employing cyodiagnostic techniques. Thus it came to be recognized that there was an urgent need for cytotechnologic education. The training was started at the following institutions: a 3-week course sponsored jointly by the JSCC and the Japanese Society of Clinical Pathology (1966); a 6-month course established at the Cancer Institute Hospital of the Japanese Foundation for Cancer Research (1968) and the Osaka Medical Center for Cancer and Cardiovascular Diseases (1988-2005); training programs at the Tokyo Metropolitan Cancer Detection Center (currently the Tokyo Metropolitan Tama Cancer Detection Center, 1978); a first 4-year university course for cytotechnology at the Kyorin University School of Health Science (1982); cytotechnology training in the Medical Technology Course, Fujita Health University College (1985-1992); and similar courses offered at the Kitasato University School of Allied Health Sciences (1994), Gunma University Faculty of Medicine, School of Health Sciences, Faculty of Health Science, Yamaguchi University School of Medicine (2001), and Cytotechnologist Course, the Department of Life Science, Kurashiki University of Science and Arts (2003). The facilities for training of cytotechnologists in Japan numbered 7 by then. A large percentage of the graduates of these courses successfully pass the qualifying examination. Quality education is a must, and those in charge must train outstanding cytotechnologists equipped with the level of technology skill and knowledge sufficient to meet the needs of modern society.

From the Japanese Foundation for Cancer Research, Tokyo, Japan.

MAURICE GOLDBLATT AWARD LECTURE 2005

AW-04 IS PREOPERATIVE CYTOPATHOLOGIC EVALUATION OF PALPABLE BREAST LESIONS OBsolete?

Marija Us-Krasovec

From Slovenia.

MAURICE GOLDBLATT AWARD LECTURE 2006

Svante Orell

Not able to attend.

From Adelaide, South Australia, Australia.

MAURICE GOLDBLATT AWARD LECTURE 2007

AW-05 A REVIEW OF PAST AND CURRENT CYTOMIC PRACTICE: THE STRENGTHS AND WEAKNESSES

Yener Erozan

Dr. Erozan will review the changes that have occurred over his years in the practice of cytology. His presentation will consider where we are now, and he will share his view of the strengths and weaknesses of our current practice.

From The Johns Hopkins University, School of Medicine, Baltimore, Maryland, U.S.A.

GEORGE L. WIED LIFETIME ACHIEVEMENT IN CYTOMIC RESEARCH AWARD

AW-06 WEB BASED TRAINING IN CYTOLOGY

U. Schenck

OBJECTIVE: To report on web-based trainings (WBT) for online continuing medical education (CME) according regulations of the Bavarian Medical Association.

Methods: Based on the user administration of the http://www.zytologie.de image gallery on the web, an e-learning platform has been created for online cytology courses. The WBT platform was programmed externally in PHP-script language in a Linux software surrounding and is running on remote web servers. User, trainer and administrative access is via web browsers and optimized for Microsoft Internet Explorer 5.5+. All registered users of http://www.zytologie.de have free access to the training platform.

RESULTS: Users and trainers have access to the WBT http://zytotraining.schenck.de by the same username and password as for the image gallery. Administration takes care of user administration and regulates trainers' rights. Access is highly individualized. The WBT main user surface is available in English or German. Functions of the main page vary with the selection of the courses. In the courses a symbol-oriented navigation surface allows courses in different languages according to the availability of trainers. WBT courses on “Glandular Cells in Gynecological Cytology,” “Cytology of the Lung” and “Gynecological Cytology” have been running, with up to 120 participants. Each of the courses contains more than 100 documents, over 200 images and several multiple-choice examination blocks consisting of a minimum of 10 questions. From the documents there are numerous internal links to a glossary of cytology. CME credit points are based on online time consumption for the
enhanced screening techniques, for example, liquid-based and HPV cervical carcinoma remain. The cost of screening programs and of ous questions regarding the best strategy to reduce the incidence of screening, HPV testing would be a more efficient strategy. Numer- testing detected 96.8% of HSIL cases. Used as an adjuvant to intraepithelial lesions (HSILs) with a specificity of 97.3%. HPV cervical cancer. Pap smears detected 71.8% of high-grade squamous rudimentary education are associated with a 23.1 per 100,000 risk of age at first intercourse, high parity, more than 1 sex partner and this community, numerous risk factors for cancer, including young ulars (VLP) and that different virus isolates may vary in the efficien- process it was important to recognize that the major structural pro- that has been confirmed in large clinical trials that formed the basis conformational manner, such as in the context of the complete virus particle. Because papillomaviruses cannot be grown to more than analytical yields in experimental systems, anything structural proteins to assemble. Using VLPs in animal models has established that the virus structural proteins that have been constructed previously. Indeed the same observa- for more than analytical yields in experimental systems, anything ular, may not be attainable. The medically underserved women say, “And don’t forget me—I am half of humanity: I do two thirds of the public’s work and earn one tenth of its income.”

From the Papanicolaou Institute, Buenos Aires, Argentina.

INVITED LECTURERS

IL-01 HISTORIC REVIEW: DEVELOPMENT OF THE HUMAN PAPILLOMAVIRUS VACCINE

L. Gissmann

Ever since the link between infection by high-risk human papillo- to the inherent properties of virus structural proteins to assemble into particles, empty capsids for different viruses had been constructed previously. Indeed the same observation was made for various papillomaviruses, including HPV 16 and 18, that cause 70% of cases of cervical cancer cases and that are a component of the present vaccines that have been developed inde- dependently by 2 different companies. To simplify the manufacturing process it was important to recognize that the major structural protein L1 is necessary and sufficient for formation of virus-like parti- cles (VLP) and that different virus isolates may vary in the efficien- cy to assemble. Using VLPs in animal models has established that neutralizing antibodies are the correlate for protection, a concept that has been confirmed in large clinical trials that formed the basis for the licensing of the HPV vaccines. It is expected that vaccination with VLPs will lead to a significant reduction of anogenital cancer (in particular cervical cancer and its precursors), of other HPV-related malignant tumors and of benign genital warts induced by HPV 6 or 11, and can be included in one of the commercial products.

From DKFZ, Heidelberg, Germany.

IL-02 HUMAN PAPILLOMAVIRUS VACCINES: CLINICAL TRIAL OUTCOMES

D. Harper

Virus-like particle vaccines specific for the L1 protein of 2 onco-