



Message from the President

Prof. Han van Krieken

Pathology in full swing!

The congress in London was two months ago, but I still have many good memories from it. It was a great pleasure to meet so many enthusiastic colleagues, to hear about so many exciting developments and to discuss so many different issues. I am very grateful for the enormous amount of work done by so many, including the staff of CPO Hanser, the ESP and the Pathological Society; the creators of the scientific sessions, the chairmen and speakers, the exhibitors and of course all participants. But although it is nice to look back, it is of course even more important to look forward. Indeed, the scientific program for the 2015 congress in Belgrade is already pretty far in its making!

One of the sessions dealt with the visibility of pathology as a profession. The pathology week and days as are being organised in the UK were shown to be a very inspiring example and in the Netherlands this is already being taken up! Also the ESP will put effort in this topic and although there is already a small group of interested persons, I would welcome others to participate in a project that may result in a European pathology day or week and maybe also other activities. So please let me know in case you like to join me!

One of the issues that was discussed in many sessions is the impact of molecular pathology on our routine work. We see more and more impact of genetic tests on treatment decisions. In my opinion, however, we should not forget that in the end it is the protein that does the trick. I believe strongly that immunohistochemistry is going to be even more important than it is today, but also that we need to increase its reliability. Too many

differences exist in staining and interpretation between laboratories. It is likely that intensity and amount of staining cells is going to be relevant for patient selection. This means that we need to have more standardisation of the pre-analytical phase, of the staining protocol, of the thickness of our slides, of the interpretation. We are going to need digital pathology for measurements.

In London I discussed with different representatives of companies that provide us with tools for immunohistochemistry and with organisers of quality assessment schemes and am sure that several actions will take place the upcoming months and that results will be shown and discussed in Belgrade.

Another positive aspect was the interest of trainees/residents to become active, and of course they are the future of pathology. Having seen so many of them, and their performances, gives me the trust that the best for pathology is yet to come.



Message from the Editor

Prof. Aurelio Ariza

While the impressive London congress by the inspiring banks of the Thames is still fresh in our minds, Belgrade is already beckoning us to a promising rendezvous by the alluring banks of the Danube in the summer of 2015. Consequently, in a Janus-like fashion, this issue of the Newsletter looks both backwards to London and forwards to Belgrade.

Thus, after being prodded into the full swing of pathology by our president's words, we can read Prof Adrienne M Flanagan's summary of the unprecedented London ECP achievements and then Prof Jovan Lole Vasiljevic's enticing description of Serbia's colourful culture and Belgrade's bustling lifestyle.

As for the section devoted to the national societies, now it is the turn of the Swiss Society of Pathology (SGPath/SSPath), whose main features are sketched by its president, Prof Laura Rubbia-Brandt, and by its ESP Advisory Board representative, Prof Luigi Terracciano. Then, in the article reserved for the ESP working groups (WGs), Prof Giorgio Stanta, chair of the Molecular Pathology WG, gives us the gist of the white paper produced by the Tissue-based Biomarkers for Advancement of Personalized Cancer Treatment Workshop, held in Graz, Austria, in March 2014.

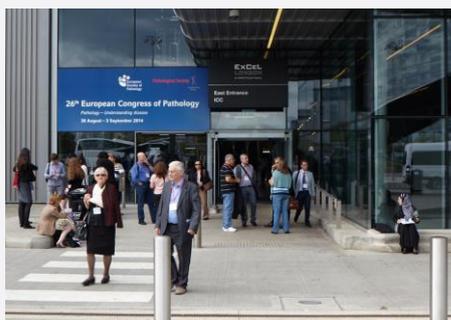
Additionally, Dr Loukas Kaklamanis offers us his already familiar selection of medical literature highlights, Prof Niki J Agnantis provides a thorough historical briefing of the Ioannina University Courses on Pathology (Ioannina, Greece, 1996-2013), and Prof Metka Volavsek reports on the 3rd Pannonian Congress of Pathology, held in Bled, Slovenia, in May 2014. Finally, Prof Gordan Vujanic keeps us abreast of upcoming pathology meetings and recently published books.

Enjoy!



Congress Report of the London European Congress of Pathology 2014

Prof. Adrienne Flanagan



The congress venue ExCel London

It is now nearly two months since the 26th European congress of Pathology took place in London held on the Banks of the Thames in the ExCeL London in East London. The Congress was organised jointly by the European Society of Pathology and the Pathological Society of Great Britain and Ireland, the first time that another society jointly organised the meeting with European Society of Pathology. The focus of the meeting centred on 'understanding disease', the mission statement of the Pathological Society. Although labelled the European Congress Society of Pathology, this was truly an international meeting with people coming from 87 countries around the world, including pathologists from Australia, Japan, China and African nations amongst others.



The joint booth of the ESP and the PathSociety

The society's meeting was opened by Professor Han Van Krieken, President of the European Society of Pathology, and Professor Ian Ellis, President of the Pathological Society of Great Britain and Ireland. Their messages to the community emphasised the importance of translational research and the pivotal role of the pathologist in contributing to understanding disease. The meeting saw large attendance and interest in the seminars and symposia on next generation sequencing and other modern technologies including digital pathology and proteomics. The speakers at these symposia are recognised as world leaders in their field. The timely symposium '*Concerning the origin of malignant tumours: Boveri and 100 years*' was organised by Professor Peter Hall. 100 years has passed since Boveri's seminal work was published

and this still proves to be the foundations for much of the work and the origins of cancer that we practice today. These talks are already published (free open access) in the *Journal of Pathology* in an *Invited Perspective*.



Prof. Han van Krieken welcoming the participants at the opening ceremony



Prof. Ian Ellis at the opening ceremony



The Welsh choir at the opening ceremony

The strength of the European Society of Pathology and the Pathological Society appear to be going from strength to strength which reflects the important of our discipline in medicine. The number of participants at the meeting reached

3,343, an increase of 23% compared to the meeting in Lisbon in 2013. This number represented 2,761 registered delegates, 142 accompanying persons and 440 exhibitors/sponsors. The total number of submitted abstracts was 1,774, an increase of 24% compared to that in Lisbon; 224 of these were oral presentations and 421 posters.

The London ECP 2014 in numbers:

Number of participants	3343
Registered delegates	2761
Accompanying persons	142
Exhibitors/sponsors	440
Submitted abstracts	1774
Oral presentations	224
Posters	421



The poster area

The meeting was not all about work, with entertainment starting on the first evening and running through the week. This was chosen to reflect the culture of Great Britain and Ireland, and included Irish dancing, Welsh Choir singers, and a truly wonderful evening listening to the London's Philharmonic orchestra in the Great Hall in Central Hall Westminster playing a repertoire including Fingal's Cave which was inspired by Mendelssohn's visit to this site off the west coast of Scotland. The last evening was the Grande Finale of the Congress Party at the Museum of London Docklands, where 'the Beatles' played and people danced through the night.



Professors Michael Wells and Aurelio Ariza at the congress concert

Feedback from delegates has been extremely positive. With at least 80% of the ratings for the science and presentations being scored as good or excellent. A big 'thank you' all the participants who joined in active discussion during the meeting, and finally a big 'thank you' to the organisers – particularly those behind the scenes who made this meeting happen smoothly.

As ever we are indebted to our sponsors and exhibiting companies, not only for their financial support but for their major contribution to the meeting in terms of technology with 9 companies who held satellite symposia.

The Meeting Society Pathological Society of Great Britain and Ireland



ESP European Congress of Pathology 2015 coming to Belgrade!

Prof. Jovan Lole Vasiljevic, Chair of the Local Organizing Committee

Welcome to Serbia!

Serbia, a country where history meets modern, countryside meets the urban and people meet each other. The first thing you will notice when coming here is an incredible sense of mixed

cultures that sends out the colorful picture saying – Welcome, feel like at home! Serbian tradition, history, culture, food, drinks, the way of entertaining and enjoying life and, of course, famous hospitality of the locals is something that will make you want to come again.

Among the top 50 destinations in the world, Serbia has managed to establish itself as a new emerging meeting destination in the Southeast Europe. For centuries, this country has been a meeting point of civilizations, located between spicy east and urban west, in the heart of the Old Continent.

Air Serbia in cooperation with Etihad Airways boosting accessibility!

Air Serbia is the brand new national airline of Serbia, serving more than 30 Euro-Mediterranean destinations directly. Besides Europe, Air Serbia also offers long-haul and international flights to Asia, Australia and the Americas through its codeshare partners and their shareholding equity partner, Etihad Airways, providing connections to over 120 destinations. Together with visa-free regime for all European and Middle East countries, and with over 900 flights per week, this makes Serbia more accessible than ever!

Belgrade lifestyle

Set in the heart of Southeast Europe, the capital of Serbia is home to nearly two million people. Belgrade is most famous for its unique spirit. Whenever you pass through the streets of this centuries old city, you will see people walking, drinking coffee, and having a quick lunch on their feet while chatting with friends. This way of life is what makes the city even more hospitable and friendly. Be it in the bustling city center, cozy suburbs, beautiful greenery of Belgrade's parks, or along the riverside, you will find cafes and places to hangout everywhere.

The shores of the Danube and Sava rivers, two important international waterways, are full of floating restaurants and bars, specialized in different cuisines and providing a beautiful view from the Belgrade waterfront. Also not to be missed is the experience of true Belgrade nightlife in clubs that will host you until the sunrise.

All this is just a part of everyday life, no matter if it's a weekday or a weekend, with families, business partners, your colleagues or friends, over espresso, cappuccino or homemade coffee – this is the Belgrade's lifestyle, to enjoy the beauty of every day.

Savamala – industrial extravaganza!

Once it was the first neighborhood built outside the fortress walls, whereas today Savamala is the alternative, urban centre of Belgrade. Throughout its history, it was known as an elite part of town, with craft workshops, rich stores and wealthy people living there. Nowadays, that old spirit is back through art. Old buildings, houses and warehouses are now a sort of an artistic realm for modern young generation, bringing up the spirit of this historical part of Belgrade and turning it into a new cultural and urban industrial design district.

Belgrade bohemian spirit

Located in the heart of Belgrade, Skadarlija is the place to experience true Bohemian spirit of the 19th century, where local people and many great figures of the local cultural scene of that period used to gather for drinks, chat, and even poets wrote down their thoughts and verses. Nowadays, nothing has changed – it still has that warm and vigorous charm.

The restaurants are designed in traditional style, offering national cuisine and all of them are well-known for tasteful Serbian dishes and live music performances. In the meantime, some restaurants went modern and are now offering international dishes as well, but the atmosphere is the same and pleasant.



**The Swiss Society of Pathology
(SGPath/SSPath)**

Prof. Laura Rubbia-Brandt, President of the Swiss Society of Pathology

Prof. Luigi Terracciano, SGPath/SSPath representative at the ESP Advisory Board

The Swiss Society of Pathology (SGPath/SSPath) with around 350 members, is one of oldest society of pathology in Europe, being founded in 1935. In that time of political turbulence, 15 scientists working at five university institutes and five cantonal hospitals founded the Free Association of Swiss pathologists, which existed up to the year 1969 in its original form. The activity took place essentially at the annual meetings where results of experimental research and new findings were presented from clinical observations in free communications. In 1970 a Technical Committee of specialized pathologists brought fundamental changes in the structures of the society and devoted himself mainly to the issues of continuing education and the settlement of the biopsy and cyto-pathological services (tariffs) and, later, to problems of quality assurance. Since 1996 after a further re-organisation of the society, the Swiss Society of Pathology includes also the Swiss Division of the International Academy of Pathology. Today the Swiss Society of Pathology includes as members clinically active medical specialists with state-recognized diploma as well active in research, veterinary pathologists and numerous, also in training pathologists. Within the SGPath /SSPath two specialized sections, namely Cytopathology and Molecular Pathology Section, are acknowledged. In the Swiss Society of Pathology there are several working groups (WG) specifically dedicated to the training and continuing education in the pathology of individual organs /organ systems. They are formed by pools of specialists devoted to different branches of pathology : WG dermatohistopathology with emphasis on cutaneous neoplasia, WG Gynecology and Breast Pathology, Swiss Association of Gastrointestinal Pathology, Swiss Hepatobiliary Pathology Group, WG Bone Marrow Pathology / Leukemias, Swiss Lung Pathology Group, Swiss Pediatric Pathology Group, Swiss Working Group on Sarcoma, Swiss Bone tumor Commission, SAKK WG Malignant Lymphomas. The Swiss Society of Pathology and its expert groups have the following purposes: promotion and advance of pathology including subspecialties in education, morphological and molecular diagnostics and research, collaborating with other societies in Switzerland and abroad, safeguarding the

professional interests of the members, implementation of continuing education and training events, promoting quality assurance and supporting the training of technical staff. The Swiss Society of Pathology is run by a Committee elected from its membership and hosts several educational events throughout Switzerland every year, including our SGPath /SSPath Annual Meeting. This year it will take place in Lausanne.

Furthermore two slide seminars per year are also scheduled.



Tissue-based Biomarkers for Advancement of Personalized Cancer Treatment

Prof. Giorgio Stanta, Chair of the Molecular Pathology Working Group

This report was summarized from the white paper on retrospective studies in archive tissues of the Workshop “Tissue-based Biomarkers for Advancement of Personalized Cancer Treatment”, held in Graz on 28th – 29th March 2014 and organized by the Molecular Pathology WGs of the ESP and OECL together with the University of Graz and BBMRI Austria. Most of the European organizations interested in clinical research in archive tissues were invited to the discussion. The complete White Paper can be found on <http://www.impactsnetwork.eu/Sections.aspx?section=170>.

Many recent papers show that results reported in medical scientific literature are not reproducible (EGAPP Working Group, 2013; Ioannidis, 2005). Furthermore, many researchers observed that today it takes too long to develop diagnostic and predictive biomarkers and that the procedure is too complex, which damages patients’ opportunities (Blanke et al., 2011). Prospective approaches in clinical trials are usually very expensive and the

follow-up is too short. On the other hand retrospective studies called “convenience studies” are mostly non-reproducible for many reasons related to the choice of patients, the design of the studies and technical performance (Simon et al., 2009).

On 28th and 29th March many European Organizations interested in cancer met in Graz to explore the possibilities to improve the quality of clinical research, to shorten the time needed for verification and validation of tissue-based biomarkers and to accelerate clinical application (Tab. 1).

The use of fixed and paraffin-embedded tissues (archive tissues - AT) stored in hospital pathology archives can be part of the solution. The recent improvements in tissue preservation during the pre-analytical phase and the capability to standardize the levels of molecular degradation do allow performing any kind of molecular analysis in AT. Research in primary and metastatic tumor tissues is necessary to better establish therapy target and intrinsic and acquired resistance predictive biomarkers. It is also crucial to validate any new diagnostic approach like liquid biopsies.

We should consider that in the pathology archives of hospitals huge collections of fixed and paraffin-embedded tissues are stored. These archives are kept as part of the diagnostic documentation and require storage for technical and juridical purposes (Bevilacqua et al. 2010). Such AT are related to clinical records and often also to follow-up information and can be utilized for medical research under further use. Those tissues represent the most complete coverage of clinical diversity of human diseases available. It is estimated that every year in Europe at least 100 million new tissue samples are collected and stored for 10 years or longer in most European countries. Recently the European infrastructure for biobanking (BBMRI-ERIC) constituted a working group, in collaboration also with the molecular pathology WG of the ESP, to study the organization to better access these tissues for clinical research. This must be done with the direct collaboration of pathologists in charge of these tissues, who cannot be the only providers of AT because of the specific clinical origin of this biological

material. This is one of the major reasons why this organization must be studied together with the pathologists and also with the organizations of the patients that were already involved in the Graz workshop discussion.

We are increasingly aware that AT samples are a key resource for the advancement of medicine and in particular of personalized medicine. This is how medicine has developed since Virchow in the 19th century. Research carried out on this material is a direct continuum with the developing experience of physicians in everyday practical clinics and it is part of the continuous process to develop medicine excellence. Clinical research should be considered as part of today's medicine and absolutely not separable from it. European Organizations and stakeholders should support such process which in today's complexity cannot rely merely on individual researchers but should be better organized through extensive cooperation among basic researchers, oncologists, pathologists, biotechnologists, patients and industry.

The cost of this kind of case studies is very low because the material is already available. At the same time, accessibility to clinical records and to the follow-up data stored in many institutions and geographical areas is also of help to develop the studies. The involvement of pathologists is also related to their function as doctors participating in the clinical process and, therefore, able to retrieve clinical and follow-up information. They are also the firewall of patient privacy because they are bound by professional secrecy, whose rules are stricter than any other general "privacy" law.

It is necessary to better establish new generation therapy targets and biomarkers to monitor intrinsic and acquired resistance to therapy. The new information acquired from the clinical level can then be used on a basic research level to confirm biological functions with an improvement in translational and reverse translational research. Even more, with sequencing procedures the information at the DNA level in cancer is almost completed, but its interpretation is still to be done and this process will be long. We need now to evaluate it at the functional level to better

understand biology and to better classify the driving impact of the alterations. Coding and non-coding RNA and protein analyses in tissues are almost at the starting point of their exploration in clinical material.

Analysis of therapy outcomes is today one of the most compelling necessities. This type of analysis is usually performed through epidemiological procedures often based on cancer registries data or other kinds of retrospective studies. ATs can be used to correlate those data with further bio-molecular information acquired through molecular analyses of patients' tissues. That way it is possible to stratify patients into homogeneous molecularly defined sub-groups with different outcomes and give further information on the predictive value of therapy and resistance biomarkers. This discussion is already ongoing within the EPAAC organization. Biomarker and outcome studies in ATs can also be an effective European contribution to drafting a new taxonomy of diseases based on molecular evidence. This taxonomy was recently proposed in a strategy document on precision medicine by the US National Research Council and will be developed in the next few decades. (National Research Council, 2011).

In the workshop it was discussed how to improve the quality of retrospective studies in ATs using population based study designs and protocols similar to prospective studies, as well as with standardization of tissue conditions and reproducible analytical methods. ATs can be readily used for affordable clinical research, verification and, in some cases, even validation of clinical biomarkers. These Retrospective Survival Studies (RSS) will reduce the time lapse for effective clinical application of predictive and prognostic biomarkers, which will allow lower costs and will enable to prepare well-oriented and efficient prospective trials.

Retrospective survival studies

There can be many types of retrospective studies with different design characteristics and in which ATs can be the biological material of interest. Examples of such studies are:
Studies related to verification of unusual clinical

cases.

- Clinical research with the use of large case studies to subdivide patients into homogeneous subgroups.
- Verification projects performed to verify rapidly biomarkers or fingerprints that were proposed by preliminary studies.
- Validation projects in which already verified biomarkers can be validated for clinical use.
- On ATs continuous performance evaluation should be done in the clinical use of predictive and prognostic biomarkers.

There are many European regions in which health treatment standards are very high, medical databases are very well developed, it is possible to have careful follow-up information and the level of patient migration is low. The study design must be well-defined before the start of the project and collection and inclusion of cases and tissues must be performed without prior collection of follow-up data and outcome definition such as in prospective studies. Even molecular analysis should be performed before cases are connected with specific outcomes. Molecular analysis should be done with well-defined standard operating procedures and with internal quality controls.

One of those models had already been discussed in the past meetings held by EPAAC (European Partnership for Action Against Cancer). In this case the outcomes of cancer treatments are analyzed by using tumor registry data, and new high-resolution studies were proposed adding more detailed and specific characteristics and molecular analysis in tissues from the pathology archives. This will be especially useful to define groups that did not respond to therapy and to find the specific molecular characteristics of those subgroups.

A second model can be developed in a large clinical network like the Organisation of European Cancer Institutes (OECI), in which biomarker validation studies are possible. In retrospective designs we should consider developing equal parallel projects in two or three big cancer institutions at the same time. Validation comes from the positive comparison of the study results.

The third model can be developed by the Biobanking and Biomolecular Resources Research Infrastructure (BBMRI-ERIC) and can be used for

retrospective clinical research in large case studies or for rare entities. The idea is to organize virtual networks of pathology archives from hospitals that have well-developed computerized databases, from which it is possible to collect large case studies of even rare tumor subgroups. This must be done with the direct collaboration of the pathologists who are in charge of the tissues and participated in the diagnostic process. That way clinical and follow-up data can be collected and precise micro-dissection of tissues can be carried out.

The fourth model is called "area model". In this case, research is done in specific geographical areas where the level of their health care systems is high and migration of resident patients is low. Sometimes those areas have tumor registries and well-developed clinical databases.

Improvement and standardization of molecular analyses in AT

One of the necessities in archive tissues, especially for diagnostics, is to have standardized conditions for specimens and biological macromolecules preservation. Much progress has been recently made through the studies first conducted by the IMPACTS group (www.impactsnetwork.eu), by the SPIDIA project (www.spidia.eu) and by the ESP group (European Society of Pathology), who recently started to develop further activities in preanalytical conditions of tissues. Recommendations for specific rules will also be given shortly by technical specifications to ISO 15189 of CEN (www.cen.eu - the European Committee for Standardization). On the other hand, the degradation level of the macromolecules can be standardized during nucleic acid or protein analysis.

One of the emerging problems in tissue analysis, and especially in cancer, is heterogeneity. We have different types of heterogeneity at the clinical level, morphological/histological level and molecular level. Morphological/histological heterogeneity is linked to general tissue characteristics like fibrosis, inflammatory infiltration, necrosis, normal tissue residues etc. Tissue heterogeneity also refers to the functional area of the analyzed tumor chosen for analysis. It was very well shown that the expression signature

of the infiltrative border of cancer is different from that of the central part of the tumor (Hlubek et al, 2007). Recognizing such characteristics is of paramount importance to obtain reproducible results in tissue molecular analysis after accurate micro-dissection.

Molecular heterogeneity is the most complex one and we are still far from understanding its high complexity. We know that this can be related to genetic clonal evolution or epigenetic clonal development or, at the functional level, wide phenomena of phenotypic plasticity, or heterotypic interaction with autocrine, paracrine phenomena. Research is still being carried out and the use of new technologies like next generation sequencing can help us to better understand the clinical meaning of this heterogeneity. Within the European Society of Pathology an inter-working group (groups performing clinical research in different type of tumours) study is in development, to enhance knowledge and strategies for cancer heterogeneity. A meeting on heterogeneity will be held in Porto in June 2015, organized by ESP with OECl and with the contribution of BBMRI.

If we only consider extraction methods for nucleic acids each method has very different characteristics and a simple change in one of the buffers can modify quality and quantity of the nucleic acids obtained (Bonin and Stanta, 2013). Different extraction methods can be more suitable for further specific analysis than others (Kashofer, 2013). Comparison of the quantity of nucleic acids extracted by different experienced laboratories can vary enormously especially for RNA (Bonin et al., 2010), even if we use the same commercial kit.

This is mostly related to the lack of strict standard operating procedures and of adequate controls. Besides the quantity of the extracted molecules, we must take into consideration the level of degradation always found in this kind of tissues. Quality assessment of DNA, RNA and proteins is crucial to obtain reproducible analysis results.

The IMPACTS group, together with ESP, OECl and other organizations, is already participating in the development of working groups to standardize

nucleic acid and protein extraction from archive tissues and their analysis with specific operating procedures and quality controls in tissues selected according to their heterogeneous composition. These working groups are:

- DNA and RNA extraction SOPs and IQC rules in AT (OECl, ESP)
- NGS in diagnostics and clinical research (ESPI)
- Pre-analytical conditions in tissues (ESP, CEN)
- Proteomics SOPs in AT (ESP)
- Heterogeneity (inter-WGs of ESP)

These groups will allow achieving a high level of confidence in the clinical studies performed in archive tissues for faster application of the results to patients.

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Websites

BBMRI-ERIC (Biobanking and Biomolecular Resources Research Infrastructure- European Research Infrastructure Consortium – www.bbmri-eric.eu)

CEN (European Committee for Standardization – www.cen.eu)

EATRIS (European Infrastructure for Translational Medicine – www.eatris.eu)

ECCO (European CanCer Organisation – www.ecco-org.eu)

ECPC (European Cancer Patients Coalition – www.ecpc.eu)

ECRIN (European Clinical Research and Infrastructure Network – www.ecrin.org)

ELIXIR (www.elixir-europe.org)

EPAAC (European Partnership Action Against Cancer – www.epaac.eu)

ESMO (European Society of Medical Oncology – www.esmo.org),

ESP (European Society of Pathology – www.esp-pathology.org) – Molecular Pathology Working Group and in collaboration with the Organisation of European Cancer Institutes.

EuroCanPlatform (<http://eurocanplatform.eu>)

IMPACTS Group (Archive Tissues: Improving Molecular Medicine Research and Clinical Practice – www.impactsnetwork.eu)

ISC (Intelligence in Science – www.iscintelligence.com)

OECI (Organisation of European Cancer Institutes OECI-www.oeci.eu) – Biobanking and Molecular Pathobiology Working Group.

SPIDIA (Standardisation and improvement of generic pre-analytical tools and procedures for in-vitro diagnostics – www.spidia.eu)

Tab. 1: Participating organizations to the GRAZ Workshop Site

Austrian BBMRI Node	www.bbmri.at
BBMRI-ERIC – Biobanking and Biomolecular Resources Research Infrastructure- European Research Infrastructure Consortium	www.bbmri-eric.eu
Czech BBMRI Node	www.recamo.cz/en/bbmri
EATRIS – European Infrastructure for Translational Medicine	www.eatris.eu
ECCO – European CanCer Organisation	www.ecco-org.eu
ECPC – European Cancer Patient Coalition	www.ecpc.eu
EPAAC – European Partnership for Action Against Cancer	www.epaac.eu
ESP – European Society of Pathology	www.esp-pathology.org
EurocanPlatform	http://eurocanplatform.eu/
French BBMRI Node	www.biobanques.eu
German BBMRI Node	Forthcoming
German Society of Pathology	www.dgp-berlin.de
ISC – Intelligence in Science	www.iscintelligence.com
Italian BBMRI Node	www.bbmri-eric.it
Medical University of Graz	www.meduni-graz.at
OECI – Organisation of European Cancer Institutes	www.oeci.eu
Royal College of Pathologists (U.K.)	www.rcpath.org
SPIDIA	www.spidia.eu

¹ Participants in the workshop: Kurt Zatloukal (BBMRI.at), Giorgio Stanta (OEI, ESP), Gerald Hoefler (Medical University of Graz), Helmut Denk (Medical University of Graz), Ivo Gut (Centre Nacional d'Anàlisi Genòmica-Barcelona), Julio Celis (ECCO), Ulrik Ringborg (EurocanPlatform), Milena Sant (EPAAC), Philippe Aftimos (Jules Bordet, OEI), Manfred Dietel (German Society of Pathology), Jonathan Bury (Royal College of Pathologists), Georges Dagher (BBMRI.fr), Michael Hummel (BBMRI.de), Marialuisa Lavitrano (BBMRI.it), Dalibor Valik (BBMRI.cz), Peter Riegman (Erasmus Medical Centre, Rotterdam), Gianni Bussolati (University of Turin), Andreas Jung (Ludwig-Maximilian University of Munich), Declan Kirrane (ISC), Markus Pasterk (BBMRI-ERIC), Anton Ussi (EATRIS), Nina Gale (University of Ljubljana), Nives Jonjic (University of Rijeka), Božo Krušlin (University of Zagreb), Huseyin Baloglu (Anadolu Hospital-Istanbul), Rares Buiga (Ion Chiricuta Cancer Center-Cluj Napoca), Emil Plesea (University of Craiova), Stoian Alexov (Bulgarian Pathology Association), Vladimir Zhavoronkov (Tatarstan Cancer Centre), Guido Hennig (Siemens), Uwe Oelmueller (Qiagen), Pasquale De Blasio (Isenet), Louisa Ludbrook (Horizon Diagnostics), Georg Steiner (Tissuegnostics), Thierry Coche (GSK), Birgit Reinhardt (Abbott).



Analecta Medica

Dr. Loukas Kaklamanis

Association Between CD8+ T-cell Infiltration and Breast Cancer Survival in 12 439 Patients

Ali HR, Provenzano E, Dawson S-J, *et al.*
Annual Oncology 2014;25:1536-1543.

Background

T-cell infiltration in estrogen receptor (ER)-negative breast tumours has been associated with longer survival. To investigate this association and the potential of tumour T-cell infiltration as a prognostic and predictive marker, we have conducted the largest study of T cells in breast cancer to date. Patients and methods: Four studies totalling 12 439 patients were used for this work. Cytotoxic (CD8+) and regulatory (forkhead box protein 3, FOXP3+) T cells were quantified using immunohistochemistry (IHC). IHC for CD8 was conducted using available material from all four studies (8978 samples) and for FOXP3 from three studies (5239 samples)-multiple imputation was used to resolve missing data from the remaining patients. Cox regression was used to test for associations with breast cancer-specific survival.

Results

In ER-negative tumours [triple-negative breast cancer and human epidermal growth factor receptor 2 (human epidermal growth factor receptor 2 (HER2) positive)], presence of CD8+ T cells within the tumour was associated with a 28% [95% confidence interval (CI) 16% to 38%] reduction in the hazard of breast cancer-specific mortality, and CD8+ T cells within the stroma with a 21% (95% CI 7% to 33%) reduction in hazard. In ER-positive HER2-positive tumours, CD8+ T cells within the tumour were associated with a 27% (95% CI 4% to 44%) reduction in hazard. In ER-negative disease, there was evidence for greater benefit from anthracyclines in the National Epirubicin Adjuvant Trial in patients with CD8+ tumours [hazard ratio (HR) = 0.54; 95% CI 0.37–0.79] versus CD8-negative tumours (HR = 0.87; 95% CI 0.55–1.38). The difference in effect between these subgroups was significant when limited to cases with complete data ($P_{\text{heterogeneity}} = 0.04$) and approached significance in imputed data ($P_{\text{heterogeneity}} = 0.1$).

Conclusions

The presence of CD8+ T cells in breast cancer is associated with a significant reduction in the relative risk of death from disease in both the ER-negative [supplementary Figure S1, available at *Annals of Oncology* online <http://annonc.oxfordjournals.org/content/25/8/1536/suppl/DC1>] and the ER-positive HER2-positive

subtypes. Tumour lymphocytic infiltration may improve risk stratification in breast cancer patients classified into these subtypes.

How Many Etiological Subtypes of Breast Cancer: Two, Three, Four, or More?

Anderson WF, Rosenberg PS, Prat A, et al.
J National Cancer Institute 2014;106

Breast cancer is a heterogeneous disease, divisible into a variable number of clinical subtypes. A fundamental question is how many etiological classes underlie the clinical spectrum of breast cancer. An etiological subtype reflects a grouping with a common set of causes, whereas a clinical subtype represents a grouping with similar prognosis and/or prediction. Herein, we review the evidence for breast cancer etiological heterogeneity. We then evaluate the etiological evidence with mRNA profiling data. A bimodal age distribution at diagnosis with peak frequencies near ages 50 and 70 years is a fundamental characteristic of breast cancer for important tumor features, clinical characteristics, risk factor profiles, and molecular subtypes.

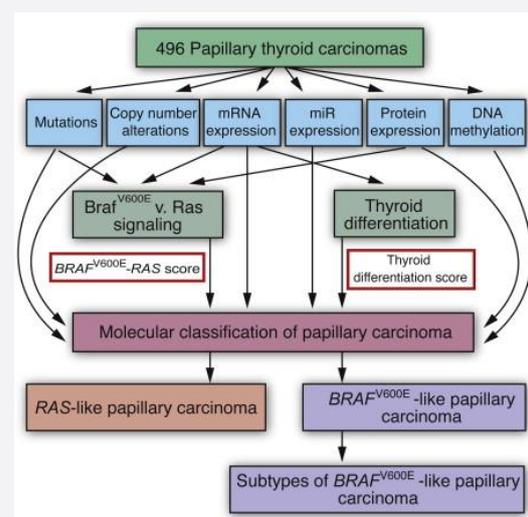
The bimodal peak frequencies at diagnosis divide breast cancer overall into a "mixture" of two main components in varying proportions in different cancer populations. The first breast cancer tends to arise early in life with modal age-at-diagnosis near 50 years and generally behaves aggressively. The second breast cancer occurs later in life with modal age near 70 years and usually portends a more indolent clinical course.

These epidemiological and molecular data are consistent with a two-component mixture model and compatible with a hierarchal view of breast cancers arising from two main cell types of origin. Notwithstanding the potential added value of more detailed categorizations for personalized breast cancer treatment, we suggest that the development of better criteria to identify the two proposed etiologic classes would advance breast cancer research and prevention

Integrated Genomic Characterization of Papillary Thyroid Carcinoma

The Cancer Genome Atlas Research Network
DOI: <http://dx.doi.org/10.1016/j.CELL.2014.09.050>

Papillary thyroid carcinoma (PTC) is the most common type of thyroid cancer. Here, we describe the genomic landscape of 496 PTCs. We observed a low frequency of somatic alternations (relative to other carcinomas) and extended the set of known PTC driver alternations to include EIF1AX, PPM1D, and CHEK2 and diverse gene fusions. These discoveries reduced the fraction of PTC cases with unknown oncogenic driver from 25% to 3,5%. Combined analyses of genomic variants, gene expression, and methylation demonstrated that different driver groups lead to different pathologies with distinct signalling and differentiation characteristics. Similarly, we identified distinct molecular subgroups of BRAF-mutant tumours, and multidimensional analysis highlighted a potential involvement of oncomiRs in less-differentiated subgroups. Our results propose a reclassification of thyroid cancers into molecular subtypes that better reflect their underlying signalling and differentiation properties, which has the potential to improve their pathological classification and better inform the management of disease.



Intratumor Heterogeneity in Localized Lung Adenocarcinomas Delineated by Multiregion Sequencing

Zhanh J, Fujimoto J, Zhang J, *et al.*

Science 2014; 346:256-259

Cancers are composed of populations of cells with distinct molecular and phenotypic features, a phenomenon termed intratumor heterogeneity (ITH). ITH in lung cancers has not been well studied. We applied multiregion whole-exome sequencing (WES) on 11 localized lung adenocarcinomas. All tumors showed clear evidence of IHT.

On average, 76% of all mutations and 20 out of 21 known cancer gene mutations were identified in all regions of individual tumors, which suggested that single-region sequencing may be adequate to identify the majority of known cancer gene mutations in localized lung adenocarcinomas. With a median follow-up of 21 months after surgery, three patients have relapsed, and all three patients had significantly larger fractions of subclonal mutations in their primary tumors than patients without relapse.

These data indicate that a larger subclonal mutation fraction may be associated with increased likelihood of postsurgical relapse in patients with localized lung adenocarcinomas.

Tumor Clone Dynamics in Lethal Prostate Cancer

Carreira S, Romanel A, Goodall J, *et al.*

Science 2014; 254:254

It is unclear whether a single clone metastasizes and remains dominant over the course of lethal prostate cancer. We describe the clonal architectural heterogeneity at different stages of disease progression by sequencing serial plasma and tumors samples from 16 ERG-positive patients. By characterizing the clonality of commonly occurring deletions at 21q22, 8p21, and 10q23, we identified multiple independent clones in metastatic disease that are differentially represented in tissue and circulation. To exemplify the clinical utility of our studies, we then showed a

temporal association between clinical progression and emergence of androgen receptor (AR)

mutations activated by glucocorticoids on abiraterone and prednisolone or dexamethasone.

Resistant clones showed a complex dynamic with temporal and spatial heterogeneity, suggesting distinct mechanisms of resistance at different sites that emerged and regressed depending on treatment selection pressure.

This introduces a management paradigm requiring sequential monitoring of advanced prostate cancer patients with plasma and tumor biopsies to ensure early discontinuation of agents when they become potential disease drivers.

Cancer of Unknown Primary Site

Varadhachary GR, MN

N Engl J Med 2014; 371:757-765

Cancer of unknown primary site is a heterogeneous group of cancers for which the anatomical site of origin remains occult after detailed investigations. The emergence of sophisticated imaging, immunohistochemical testing, and molecular-profiling tools has influenced our approach to unknown primary cancer, although it has also increased the ambiguity of designations for this disorder. In the era of tailored therapeutic strategies, this situation presents both an opportunity and a challenge.

The past four decades have seen a shift in our understanding of unknown primary cancer.

First, improved imaging techniques increased our confidence in the classification of some cancers as having an occult primary origin. Later, subsets of unknown primary cancers with an apparently favorable prognosis were identified, primarily on the basis of histopathological findings, the pattern of spread, and serum markers. Subsequently, with the advent of new immunohistochemical markers and advances in diagnostic pathological tests, tissue-of-origin profiles were described that assigned additional putative primary sites to unknown primary cancer on the basis of immunohistochemical patterns. Current research involves the application of proteomic and genomic tools to unknown primary cancer. Cancer of unknown primary site was once viewed almost as a separate type of cancer, with the assumption that,

regardless of the site of origin, the tumors in unknown primary cancers shared biologic properties, perhaps including rapid progression and dissemination, which contributed to their presentation. This view drove the conduct of phase 2 empirical trials over the past three decades, with the goal of developing standard chemotherapy regimens that would be effective in all patients with unknown primary cancer. The underlying assumption was that variations in presentation would not have a substantial effect on therapeutic approaches or survival. Our view of unknown primary cancer has evolved as our understanding of cancer biology in general has matured to become much more personalized. Many people now believe that tumors in unknown primary cancer may retain the signature of the putative primary origin and that extending the management of known cancers to subtypes of unknown primary cancer can contribute to advancements in therapies for this disease. Cancer of unknown primary site could even be seen as the epitome of personalized medicine, with individualized treatment driven by the mutational status of each patient.

The biologic events that allow the primary site to remain obscure after the development of metastases have not yet been defined. Studies that have shown chromosomal abnormalities, microvessel density, aneuploidy, and overexpression of several genes suggest that these abnormalities are not unique to unknown primary cancer.⁷⁻¹¹ With the use of the Sequenom MassARRAY platform, a study involving consecutive patients with unknown primary cancer showed a low rate of mutations (in 18% of patients).¹² No new, low-frequency mutations were found with the use of a panel of mutations involving the phosphatidylinositol 3-kinase (PI3K)–AKT pathway, MEK pathway, receptors, and downstream effectors.

Furthermore, there are major obstacles to conducting the trials that would be required to show definitively that unknown primary cancer with a putatively identified source behaves the same way as metastatic disease with a similar, known primary site.



IUCP- A Historical Briefing

Prof. Niki Agnantis

The Ioannina University Courses in Pathology (IUCP) are postgraduate courses on selected topics of Human Pathology that have been offered since 1996, after the unanimous decision of the Executive Committee of the European Society of Pathology (Brussels, June 1995), to give the ESP auspices to the organization of the IUCP, within the frame of the European Institute for Continuing Medical Education (EICME).

Two courses (or Part I and Part II) are offered each year. The aim of the Courses is to bring together young Pathologists or 4th and 5th year residents with Tutors, experts in the various fields of Pathology and to encourage active participation of all colleagues during the discussions following the lectures and the slide seminars, providing an in-depth review of Diagnostic Surgical Pathology. An emphasis is given to morphological features, newly recognized entities and modern laboratory techniques. A limited number of didactic lectures, given by established and distinguished investigators, cover each topic theoretically. After the experience gained from the first course (May 1996), a number of distinguished clinicians were gradually incorporated in the list of invited speakers. A tradition has been established, where the Opening Lecture is offered by a distinguished clinician, specialist on the subject. The Opening Lecture has always been dealing with “The challenge for co-operation with the Pathologist”.

Until 2008, individual lectures regarding imaging and therapeutic approaches (chemotherapy,

radiotherapy, surgery) were also offered by specialized clinicians distinguished in the field. During the last years clinicians incorporate their talks in multidisciplinary Sessions. Furthermore, the Scientific Programme is enriched with many Slide Seminars, which are offered in the form of interactive case presentations. The duration of each Course (or each Part) is approximately 2 days (~14 credit hours). Each course has been designed for 40-50 pathologists and clinical colleagues related to the subject. Over the years, besides the Greek students we also had participants from: Cyprus, Balkan Countries, Hungary, Czech Republic, Russia, Georgia, Italy, Spain and Jordan, who accounted for approximately 25% of the student body. A brief curriculum vitae stating particular experience or interest in the topic of the Course is always required for the preparation of the final list of tutors and participants, and for the archives of the Institute. Diplomas are given for regular attendance only and include the number of credit hours, always according to the criteria of the Royal College of Pathologists (U.K.). At the end of each Course students are asked to complete an evaluation questionnaire, with the scope to test the quality and effectiveness of the Course, and to improve the content of the Educational Programme. This questionnaire covers: the content of provided information, the quality of presentations and the effectiveness of the teaching style. The above categories are graded from 1-5, from very good to very poor. The results from this evaluation system are mailed to the Speakers and kept in our archives. In addition, a multiple-choice examination is completed by the Participants, without the obligation to sign their names.

In the First Series sixteen courses were offered and covered the following topics: *gynaecological, bone and soft tissue, paediatric, skin, liver, lung, breast, prostate, salivary gland, thyroid, gastro-intestinal and biliary tract and pancreas, renal and urinary bladder pathology.*

In the Second Series twelve courses were offered and covered the following topics: *gynaecological, prostate, breast, skin, bone and soft tissue (25th*

Silver Course), pulmonary and mediastinal, renal and adrenal, and liver pathology.

In 2010, consistent with our commitment for interactive participation of all (Organizing Committee, Tutors and Students) in the realization of IUCPs, a questionnaire was distributed at the end of the course asking for the preferred subject of IUCP 2011. The topic Gynaecological Pathology/Oncology was voted by the vast majority for 2011. This topic was offered for the third time, thus, the third series of IUCP commenced. In this series the following years the topic of Breast Pathology/Oncology was offered.

During my long career in organizing the IUCP, I have faced several challenges and I have learned a lot from hands-on experience. For a successful organization the active involvement of a University Medical School is necessary. Publicity should also be provided by the official Societies of Pathology (Hellenic, European Society of Pathology and IAP). Furthermore, personal communication with the directors of large national and international hospitals is always helpful. For this reason an attractive poster is always circulated through e-mail with all the available information. Participation is always encouraged if the registration fees are the lowest possible. This cannot be achieved without sponsoring by the Societies of Pathology. Since the aim of the Course is educational we always encourage the participation of residents and young pathologists from our neighbouring Balkan countries, by waiving their registration fee. We believe that with the organization of the IUCP our Institution, along with ESCOP and Euro Cell Path, has significantly contributed to the field of Continuing Medical Education in Europe.



Report on the 3rd Pannonia Congress of Pathology, Bled, Slovenia, 2014

Prof. Metka Volavšek

After successful organization of congresses in Graz (Austria) and Siófok (Hungary), the already traditional biannual the 3rd Pannonia Congress of Pathology (PCP), a joint event of six participating societies, Austria, Croatia, Czech Republic, Hungary, Slovakia, and Slovenia, has taken place from May 15-17 in Bled (Slovenia). The picturesque Bled, renowned by its alpine lake with island in the middle, chosen by local organizers, Slovenian Society of Pathology and Forensic Medicine, was a perfect location of the meeting, offering well equipped conference center Festivalna dvorana lying close by the lake shore and hotels.

The 3rd PCP started with introductory Basics in pathology courses on Neuropathology and Pathology of serous cavities. Main congress topics Dermatopathology, Gastrointestinal pathology and Uropathology, each represented by the plenary session and a slide seminar of up to eight cases, were supplemented by symposia on Molecular genetics and treatment of melanoma and Inflammatory bowel disease. Lectures dedicated to the Next generation sequencing and Diagnosis of neuroendocrine neoplasms were added to main topics, as well as special session on Pathology in media, with which prof. Fatima Carneiro, Past President of the ESP, started a vivid round table

discussion on how pathology is, or should be, perceived by the society in general. The Congress, supported by the ESP, was honoured by the presence of its acting president prof. Han van Krieken, who provided an excellent keynote lecture on New developments in pathology of the gastrointestinal tract. Although the list of speakers has additionally been enriched by world known experts Richard Attanoos, Thomas Brenn, Eduardo Calonje and Günter Klöppel, the vast majority of the programme was covered by speakers from the participating countries, suggested by all countries' pathological societies for each of topics.

Last day of the conference was highlighted by an outstanding Special slide seminar with 11 carefully selected cases, presented by young pathologists, mostly residents. High quality of their performance matched well with the quality of the whole congress. There were 189 registered participants coming from 17 countries and 3 continents. Among 51 posters three were selected to receive best poster awards. Their presenting authors were delighted receiving a surprise gift in form of a panoramic flight above Triglav national park.

Proceedings of the congress included contributions from courses to symposia, slide seminars as well as poster abstracts.

The website <http://www.klinika-golnik.si/pannonia> includes all other information. A pre-congress meeting on New developments in molecular diagnostics and targeted therapy of non small cell lung cancer was organized on May 14, 2014.

Social programme with welcome reception at the Bled castle and the congress dancing dinner party rounded up the pleasant atmosphere of a relatively small congress which nevertheless was big enough for high scientific quality. As PCPs continuously prove importance of regional initiative to organize meetings enhancing exchange of knowledge and regional collaboration, we are looking forward to the next, the 4th PCP in Osijek (Croatia) in year 2016.



Some Recently Published Books

Prof. Gordan Vujanic

Cutaneous Hematopathology: Approach to the Diagnosis of Atypical Lymphoid-Hematopoietic Infiltrates in Skin

Hernani Cualing, Marshall Kadin, Mai Hoang, and Michael Morgan
2014, 602 pages, 452 illus, ~€180

This book is a comprehensive guide to occupational factors of malignant diseases. It discusses potentially work-related malignancies, in the context of exposure assessment, specific clinical and pathological features of occupational cancer and biomarkers of exposure and disease. Epidemiological data about risk ratios of the cancer in question are reviewed for various occupations and with exposure to specific carcinogens, carcinogenic mechanisms, host susceptibility factors (genetic and other) and other environmental and life-style risk factors.

Biopsy Interpretation of the Prostate

Jonathan Epstein and George Netto
2014 (5th ed), 440 pages, 350 illus, ~€130

Under the guidance of top experts, you'll learn the state-of-the-art, illustrated guide to prostate biopsy pathology interpretation. Authored by the field's most established experts, you'll learn to employ the best utilization of H&E microscopy along with the latest immunohistochemical markers in order to deliver accurate, reliable diagnoses.

Handbook for Clinical Research: Design, Statistics, and Implementation Flora Hammond, James Malec, Todd Nick, and Ralph Buschbacher
2014, 352 pages, ~€55

With over 80 information-packed chapters, Handbook for Clinical Research delivers the practical insights and expert tips necessary for successful research design, analysis, and implementation. Using clear language and an accessible bullet point format, the authors present the knowledge and expertise developed over time and traditionally shared from mentor to mentee and colleague to colleague. Organized for quick access to key topics and replete with practical examples, the book describes a variety of research designs and statistical methods and explains how to choose the best design for a particular project.

Diagnostic Pathology: Placenta

Amy Heerema-McKenney and Monique E De Paepe
2014, 352 pages, ~€180

Diagnostic Pathology: Placenta is designed for practicing pathologists and pathologists-in-training, though will prove useful to anyone interested in fields related to pathology of the placenta. This reference provides clear and concise information on topics such as, gross and microscopic changes of the placenta, common diagnoses, and placental evaluation in special circumstances. Also included are reference charts and sample templates for placental evaluation.

Human Histology

By James S. Lowe and Peter G. Anderson
2014 (4th ed), 448 pages, 900 illus, ~€55

Master the latest in the ever-evolving field of histology with the in-depth and visually engaging Stevens and Lowe's Human Histology. Intended as a complete introduction to the subject, this updated medical reference book incorporates clinical correlations and case studies with the basic information that's essential for students to thrive in the medical environment.

Surgical Pathology of the GI Tract, Liver, Biliary Tract and Pancreas Pathology

Robert D. Odze and John Goldblum
2014 (3rd ed), 1632 pages, 3000 illus, ~€250

The updated edition of Surgical Pathology of the GI

Tract, Liver, Biliary Tract and Pancreas is designed to act as a one-stop medical reference book for the entire gastrointestinal system, providing exhaustive coverage and equipping you with all of the necessary tools to make a comprehensive diagnostic workup. You'll access thousands of high-quality illustrations and eight brand-new chapters, so you can recognize and diagnose any pathological slide you encounter.

Neoplastic Mimics in Gastrointestinal and Liver Pathology

Arief Suriawinata

2014, 264 pages, 300+ illus, ~€110

This book provides the pathologist with detailed morphologic descriptions and diagnostic guidance in recognizing these mimics as they occur in the gastrointestinal system and liver. In addition, descriptions and diagnostic guidance are provided for the range of lesions that may mimic benign masses but are in fact neoplastic. Throughout the book, comparisons of neoplastic mimics with true neoplasms are provided at clinical, gross, and histologic levels. In the presentation of every entity, the points that contribute to differential diagnosis are emphasized.

Biopsy Interpretation of the Liver

Michael Torbenson

2014, 544 pages, 300 illus, ~€125

Exceptional liver disease treatment starts with Biopsy Interpretation of the Liver. A tried-and-true guide for physicians, surgeons, and clinicians, this bench reference promises to keep you informed, skilled, and on the forefront of liver biopsy. Go beyond the superficial, framing each diagnosis in its most common clinical context, alongside clinical recommendations. Don't fall behind in your understanding of biopsy; equip your practice with the tools to effectively diagnose and offer the highest in patient care.

The Pediatric and Perinatal Autopsy Manual

Marta Cohen and Irene Scheimberg

2014, 444 pages, 427 illus, ~€120

The Pediatric and Perinatal Autopsy Manual is a clear and practical yet comprehensive guide for pathology trainees and non-pediatric pathologists. With chapters organized by types of autopsy, this manual answers questions such as: what do I do in cases of congenital malformation or suspected metabolic disease? What is important in the diagnosis of intrapartum and neonatal death? What must I consider in a baby with intrauterine growth restriction and stillbirth? How do I perform a post-mortem in a case of sudden death in infancy? Chapters describe the most important conditions to consider when examining the organs, both macroscopically and histologically, as well as descriptions of how to perform the autopsy.

Heptinstall's Pathology of the Kidney

J. Charles Jennette, Vivette D'Agati, Jean Olson and Fred Silva

2014 (7th edition), 1592 pages, 1500+illus, ~€300

If you're looking to deepen your understanding of kidney disease, look no further than Heptinstall's Pathology of the Kidney, 7th Edition. Authored by the world's most accomplished renal pathologists, this image-rich text conveys the intricacies and comprehensiveness of renal disease, offering powerful diagnostic and treatment recommendations from decades of clinical research. Stay up to date on the cutting edge of kidney research and treatment and offer your patients the best therapeutic options and preventative measures available today.

Cutaneous Soft Tissue Tumors

Luis Requena and Heinz Kutzner

2014, 984 pages, 2000+ illus, \$361 list

Don't skim the surface of diagnosis; gain in-depth, full-color insight with Cutaneous Soft Tissue Tumors. This succinct, yet meaningful, field guide deconstructs all presentations in one easy-to-read and comprehensive text. With over 2,000 color images right at your fingertips, you'll examine magnified, panoramic, and architectural views of each proliferation, fostering maximum understanding. Add Cutaneous Soft Tissue Tumors to your bookshelf and you'll master the essential

skill of histopathological diagnosis to deliver the best courses of treatment for your patients.

Digital Pathology

Yves Sucaet and Wim Waelput
2014, 83 pages, 10 illus, ~€35

Digital pathology has experienced exponential growth, in terms of its technology and applications, since its inception just over a decade ago. Though it has yet to be approved for primary diagnostics, its values as a teaching tool, facilitator of second opinions and quality assurance reviews and research are becoming, if not already, undeniable. It also offers the hope of providing pathology consultant and educational services to under-served areas, including regions of the world that could not possibly sustain this level of services otherwise.

Cutaneous Lymphomas, An Issue of Surgical Pathology Clinics

Antonio Subtil
2014 1st Edition, ~€70

Knowledge of cutaneous lymphomas has been growing significantly as a result of important discoveries in immunology, molecular biology, and immunohistochemistry. Improved clinical pathologic correlation and follow-up data, as well as the synergistic collaboration among different lymphoma registries and specialists from several academic medical centers have greatly contributed to the understanding of the difficult field of cutaneous lymphoproliferative disorders. While these advances have increased understanding of skin lymphomas, they have also produced an extensive and sometimes confusing litany of articles, studies, and classification schemes.

Upcoming Pathology Meetings

Prof. Gordan Vujanic

AMP 2014 Annual Meeting

Association for Molecular Pathology
13-15 November 2014
National Harbor, Maryland, USA
<http://www.amp.org/meetings/index.cfm>

ASCP 2014 Annual Meeting

American Society for Clinical Pathology (ASCP)
8-11 October 2014
Tampa, Florida, USA
<http://www.ascp.org/2014-Annual-Meeting/index.html>

The 30th Annual Meeting for the Histiocyte Society

Histiocyte Society (HS)
28-30 October 2014
Toronto, Ontario, Canada
<http://www.histiocytesociety.org/annualmeeting>

BDIAP 109th Symposium on Gynaecological Pathology, a Joint Meeting with the ISGP

International Academy of Pathology - British Division (IAP-BD)
21-22 November 2014
London, UK
<http://www.bdiap.org/>

American Society of Hematology (ASH) 56th Annual Meeting

6-9 December 2014
San Francisco, California, USA
<http://www.hematology.org/Annual-Meeting/Registration.aspx>

Society for Pediatric Pathology (SPP) Spring Meeting

21-22 March 2015
Boston, Massachusetts, USA
<http://www.spponline.org/>

USCAP 2015 Annual Meeting

United States & Canadian Academy of Pathology (USCAP)
21-27 March 2015
Boston, Massachusetts, USA
<http://www.uscap.org/meeting/70313>

and – save the dates:

27th European Congress of Pathology Belgrade 2015

European Society of Pathology Congress
Pathology – breaking barriers in medicine
5-9 September 2015
Belgrade, Serbia
www.esp-congress.org