YOUNG ONCOLOGIST CLUB

II Winter School of Medical Oncology

Europe & Asia
Discussion on the Future of Cancer Treatment

Borovets, November 1-3, 2019

MEDICAL UNIVERSITY OF PLOVDIV

BIN

Chinese European Alliance of Oncology CEAO since 2018

Uni Hospital

University Prof. Dr. Asen Zlatarov Burgas

Programme

Friday, November 1, 2019 (Day 1)

09.00 – 09.30	Conference opening/welcome addresses – Young Oncologist Club Bulgaria, Uni Hospital, Medical University Plovdiv, University "Prof. D-r Asen Zlatarov" - Burgas, BINO, China European Alliance of Oncology

THORACIC CANCER SESSION

Moderators: N. Chilingirova & S. Katov & Y. Yordanov

09.30 – 09.50	Biomarkers for Cancer Immunotherapy – Xiuyu Cai
09.50 – 10.20	Lung Cancer Screening – Challenges and unsolved issues – W. Voigt
10.20 – 10.40	Surgical Management of Lung Cancer – Oligometastatic Disease – A. Chapkunov
10.40 – 11.00	New Exploration of Local Treatment of Advanced NSCLC – Hongbo Wu
11.00 – 11.15	Pathologist in the Lung Cancer – What's Old and What's New – A. Fakirova
11.15 – 11.30	Lung Cancer Diagnosis – L. Pilz
11.30 – 11.40	Coffee Break
11.40 – 12.00	Modern Radiotherapy of Lung Cancer – T. Hadjieva
12.00 – 12.20	Targeted Therapies in Lung Cancer. What is New? – N. Chilingirova
12.20 – 13.15	MSD Symposium
13.15 – 14.00	Lunch
14.00 – 15.00	Roche Symposium
15.00 – 15.20	PET-CT Diagnostics and Follow-up in Thoracic Tumors – P. Castellucci
15.20 – 15.40	Management of Advanced NSCLC: Novel Immuno-therapeutic Agents – Chr. Manegold
15.40 – 16.00	The Contribution of EGFR Mutation to the Therapeutic Efficiency of Immune Checkpoint Blockade in NSCLC – Yang Xia
16.00 – 16.20	Neoadjuvant Systemic Therapy in HER2 Negative Breast Cancer – A. Konsoulova
16.20 – 16.30	Coffee Break
16.30 – 16.50	Management of SCLC – S. Baka
16.50 – 17.10	Boehringer Ingelheim Symposium
17.10 – 17.40	Evolving the Treatment Practice of Advanced EGFRm NSCLC – N. Chilingirova

L. Pilz & N. Chilingirova – Group 1

R.Krasteva & A. Konsoulova – Group 2

17.40 – 18.15	Workshop Young Oncologists Competition – Compare our Knowledge – Interactive Session
18.15 – 18.35	Cancer Therapy Based on Tumor Genetics - The New Revolution in Oncology – R. Krasteva

Poster session

14.00 – 19.00

19.00 – 22.00 Dinner

Saturday, November 2, 2019 (Day 2)

BREAST CANCER SESSION

CHAIRS: Al. Gerasimov & V. Stoykova & P. Balikova

09.30 – 09.50 Pathology. Molecular Biology – J. Besusparis

09.50 – 10.20 Sentinel Node Dissection and PET/CT Diagnostics in Breast Cancer – Q. Siraj

10.20 – 10.40 Breast Implant – Associated Anaplastic Large Cell Lymphoma (BIA-ALCL): How to Deal With? – Y. Yordanov

10.40 – 11.00 The Power of Ga-68 – Generator and Cyclotron Based Production Initiate Development of new Radiopharmaceuticals and Increased Clinical Interest – E. Janevik

11.00 – 11.20 Coffee Break

11.20 – 11.40 Management of Bone Disease – A. Tomova

11.40 – 12.00 Management of Breast Cancer – Surgical Experience – K. Shopov

12.00 – 12.40 Actavis Symposium

12.40 – 13.00 Building a Carrier of Young Oncologist - How Does It Work? – M. Vassileva, A. Konsoulova

13.00 – 14.00 Lunch

14.00 – 14.40 Eli Lilly Symposium

14.40 – 15.00 BRCA Mutations and PARP Inhibitors – R. Krasteva

15.00 – 15.20 Exclusive and Adjuvant Radiotherapy in Locally Advanced and Primary Metastatic Breast Cancer – N. Velikova

15.20 – 15.40 Neo Adjuvant and Adjuvant Therapy for HER -2 + Breast Cancer - M. Koleva

15.40 – 16.00 Immunotherapy of Breast Cancer – Chr. Zielinski

16.00 – 16.15 Coffee Break

16.15 – 16.45 Transformation of Ovarian Cancer Treatment. Is it possible? – R. Krasteva

16.45 – 17.05 Establishing Biochemical Progression in Advanced Prostate Cancer – K. Genova

NEUROENDOCRINE TUMORS SESSION

CHAIRS: Olga Kosseva & T. Pirdopska & P. Balikova

17.05 – 17.30 Pathological and Molecular Features of Gastroenteropancreatic and Lung Neuroendocrine Tumors – M. Papotti

17.30 – 17.50 Peptide Receptor Radionuclide Therapy in NET – I. Virgolini

17.50 – 18.05 Treatment Strategies – S. Katov

18.05 – 18.20 Nuclear Medicine for Diagnosis in Thyroid Tumors DTC and MTC – S. Sergieva

18.20 – 18.40 New Opportunities for Metastatic Colorectal Cancer Therapy – R. Krasteva

18.40 – 19.30 Tumor Board – Interactive Session – Chr. Manegold, R. Krasteva, M. Koleva, S. Yan

20.00 – 23.00 Dinner

Dr. Rossitza Krasteva

Welcome to the Second Winter School of Medical Oncology - Europe & Asia - Discussion on the Future of Cancer Treatment

DEAR COLLEAGUES,

We are pleased to invite you to the Second Winter School of Oncology 2019 entitled Europe and Asia - Discussion on the Future of Cancer Therapy. This is an initiative of the Chinese-European Alliance of Oncology in cooperation with Young Oncologist Club Bulgaria, Plovdiv Medical University, Unversity "Prof. Dr. Asen Zlatarov" - Burgas and Balkan Investigational Network of Oncology.

Leading oncology experts from Austria, Bulgaria, China, Germany, Greece, Italy, Kuwait, Lithuania and Poland will have lectures at the event.

Agenda includes sessions and discussions on new treatments for breast cancer, lung cancer, neuroendocrine tumours, and other topics presenting the latest advances in medical oncology. All lectures will be presented in English.

We will be focusing on cancer treatment innovations and breakthroughs, novel opportunities for longer remissions, better quality of life of our patients and getting closer to the ultimate cancer cure.

New trends and standards will be presented, and current issues will be discussed in the efforts to find the best solutions together. We hope that each of you will find new inspiration and knowledge during these two days, exploring each and every opportunity to make new contacts and friends at this meeting of the East and the West.

Through a format of debates, lectures and panel discussions, the meeting will provide a forum to effectively address clinical and therapeutic problems as well as innovative diagnostic procedures.

I wish you all two fruitful and useful days. Enjoy yourselves and learn as much as you can. I declare the II Winter School of Medical Oncology open!

Prof. Wieland Voigt

Lung cancer screening - challenges and unsolved issues

Lung Cancer has the highest cancer-related mortality rate globally. Without screening, it is usually detected at advanced stages with overall limited curative potential. Recent studies with low dose CT (computed tomography) scan demonstrated a shift towards the detection of lung cancer at early stages and thereby to significantly improve overall survival. Based on this data, lung cancer screening with low dose CT is implemented on a national level in the United States with however still limited participation rate. Other nations such as in Europe still further debate on the optimal set up of a screening program. However, recent data from large multicenter European studies such as the Nelson trial clearly confirmed the value of lung cancer screening with low dose CT and warrant to start planning such programs. Key challenges in the optimal design of a screening program that will be discussed in my presentation are the following: 1) optimal selection of the screening population – what are the relevant criteria for risk definition? 2) optimal timing of lung cancer screening intervals 3) technology requirements for a screening program – CT configuration and radiation dose 4) improving accuracy in nodule measurement – diameter vs. volumetric measurement 5) how to manage screening-detected lung nodules at baseline screening and incident rounds – a recommendation from the Nelson trial. New technologies are currently emerging with the potential to improve patient selection for screening (e.g. exhaled breath testing) or to aid in the discrimination between benign and malignant nodules e.g, based on textural analysis using artificial intelligence. In my lecture, I will address the question of how these technologies could be integrated into a screening program set up. As with other screening programs, the efficacy of a lung cancer screening program is determined by the participation rate. Therefore, the setup of a population-based screening program needs to ensure that in particular the high and very high-risk individuals will be recruited. Lung cancer screening programs have the potential to impact health outcomes not just be early detection of lung cancer but also by counseling participants to quit smoking. This will ultimately reduce the risk of several additional smoking-related diseases such as further cancer types or cardiovascular diseases.

Professor Voigt studied medicine at the Medical University in Hannover and Martin-Luther-University in Halle/Wittenberg, Germany. After graduation he took an additional 2 years training in molecular tumor biology and pharmacology at Roswell Park Cancer Institute in Buffalo, USA. He continued his career at Martin-Luther-University Halle/Wittenberg and became a board certified specialist for Internal Medicine, Hematology and Oncology as well as Palliative Care. He holds a doctoral degree in medicine and is habilitated for Internal Medicine and Oncology. After 13 years serving in Halle in various leading positions, Professor Voigt took a position as a global Chief Medical Officer at Siemens Healthineers where he in addition serves in a role of a principle key expert. As further expansion of his assignments he was appointed for a professorship at Steinbeis University for Innovation in Oncology as part of the Steinbeis Transfer Institute Medical Innovations and Management.

Prof. Xiuyu Cai

Prof. Xiuyu Cai, is now an Associate Senior Doctor, Associate Professor, medical doctor, master tutor working at Sun Yet-Sen University Cancer Center in Guangzhou, China. He was the most potential young-aged Oncologist under the age of 35 in China held by CSCO in 2017, The best Poster Award for the seventeenth Oncology Conference in Hong Kong. He has published 28 articles in Scientific Citation Index as the first/corresponding author. One of the first author's papers was included as 2B level evidence by the 2014 NCCN Guidelines and Reported in Global Academic Programs in MD Anderson/WCLC-IASLC in 2017. He was also a member of several international and Chinese oncology society including ASCO, ESMO, IASLC and CSCO, etc.

Dr. Anastas Chapkunov

Dr. Anastas Chapkunov is a surgeon in the department of breast surgery at the Kaspela Hospital. He graduated from medicine in Plovdiv. After graduation, she worked at the Oncology Clinic for 3 years. He won a competition at the Clinic of Thoracic-Abdominal Surgery at St. George's University Hospital. There are three specializations- General and Thoracic Surgery and Oncology. Both of his parents are medics - his father is a cardiologist at the University Hospital in Plovdiv, and his mother is a teacher and head of the Department of Histology.

Experience: 1992 - 1995, Coordinator in the Surgical Department, Regional Oncological Dispensary - Plovdiv. 1995 to 2013 - Assistant at the Clinic of Thoracic and Abdominal Surgery, University Hospital "St. Georgi "- Plovdiv. Since 2000-Assistant Professor at the Department of Special Surgery - Medical University of Plovdiv. Since 2013 Head of the Clinic of Thoracic Surgery, University Hospital "Kaspela" - Plovdiv

Specialties: 1997 - General Surgery; 2000 - Oncology; 2003 - Breast Surgery
Membership in professional organizations: Bulgarian Medical Association, Bulgarian Surgical Society
Bulgarian Association for Thoracic, Cardiac and Vascular Surgery, European Society of Thoracic, Surgeons (ESTS), 2011-2013 Regent for Bulgaria of ESTS, International Association for the Study of Lung Cancer (IASLC)

Professional interests:
Diagnosis of diseases of the trachea, bronchi, lung, chest, mediastinum:
Surgical treatment of diseases of the trachea, bronchi, lungs, chest wall, mediastinum:
Minimally invasive (bloodless) anatomic pulmonary resections in lung tumors
Mini-invasive (bloodless) interventions for the diagnosis of diseases of the trachea, bronchi, lung, chest, mediastinum:
Minimally invasive (bloodless) surgical interventions for treatment of diseases of the trachea, bronchi, lung, chest, mediastinum:
Treatment with pneumothorax
Treatment for pleural effusions (collection of fluid around the lung)
Surgical treatment of esophageal diseases
Diagnosis and treatment of breast diseases

Assist. Prof. Hongbo Wu

Assistant Professor in Henan Cancer Hospital

Visitor Scholar in Harvard Medical College

Executive deputy secretary-general of Cancer clinical collaboration group in Central China

Member of Tumor Chemotherapy Professional Committee of China Medical Education Association

Member of Photodynamic Committee of Chinese Anti-cancer Association

Member, Respiratory Endoscopy Association, World Endoscopy Association

Member of Youth Council of Henan Anti-Cancer Association

Member of the Standing Committee and Vice Chairman of the Youth Committee of the Professional Committee of Tumor Chemotherapy of Henan Anti-cancer Association

Vice Chairman of Youth Committee of Lung Cancer Branch of Respiratory and Critical Diseases Association of Henan province

Secretary of Targeted therapy Committee of Henan Anti-cancer Association

Member of the Professional Committee of Tumor Psychology of Henan Anti-cancer Association

Member of Esophageal Cancer Professional Committee of Henan Anti-cancer Association

Dr. Albena Fakirova

Pathologist in the Lung Cancer – What's Old and What's New

Fakirova Albena, Ilcheva Boryana

MMA-Sofia, Uni Hospital

Introduction: Lung cancer is the most common cause of cancer-related mortality in both men and women worldwide, with around 1.8 million new cases reported every year. Non-small cell lung cancer (NSCLC) represents 85% of all lung cancers. NSCLC is further classified into two types: squamous-cell carcinoma and adenocarcinoma, with adenocarcinoma being the most common – around 40% of the cases. Risk factors for developing lung cancer are well known - as smoking is the major risk factor, as well as environmental factors and as recent studies have shown – genetic also has a major role in developing lung cancer. Depending on the staging of lung cancer, patients are eligible for certain treatments - from surgery to radiation and chemotherapy. In the last few years, there has been an improvement in lung cancer therapy, linked to the finding the role of checkpoint inhibitors and target therapy.

Methods: Screening the general population to detect cancer in earlier stages with X-Ray is very important. In addition, it is critical to develop more sensitive technologies for the early detection of lung cancer and to improve lung cancer survival rates. Over the past few years, the liquid biopsy has become an attractive new noninvasive method alternative to tissue biopsy, that provides specific information on circulating biomarkers in patients' blood. Results: Different biosources from liquid biopsy, including cell-free circulating tumor DNA (ctDNA), circulating tumor cells (CTCs) and tumor-educated platelets (TEPs), have also been widely investigated for their potential role in lung cancer diagnosis.

Results: Different biosources from liquid biopsy, including cell free circulating tumor DNA (ctDNA), circulating tumor cells (CTCs) and tumor-educated platelets (TEPs), have also been widely investigated for their potential role in lung cancer diagnosis. Liquid biopsy for plasma ctDNA may rapidly identify actionable mutations to guide precision therapy, faster than tissue. Despite many studies having demonstrated the viability of liquid biopsy using CTC and ctDNA, there is currently no consensus on the criteria for use of these circulating biomarkers as prognostic markers in NSCLC.

Conclusion: The most important goal in treating lung cell carcinoma is early detection and personalized therapy. Additionally genetics and biomarkers are helping in personalizing management and treatment of every patient. Despite many studies having demonstrated the viability of liquid biopsy using CTC and ctDNA, there is currently no consensus on the criteria for use of these circulating biomarkers as prognostic markers in NSCLC. The ability to apply liquid biopsy to routine clinical use is certain to increase in the future.

Dr. Albena Fakirova has been working for 11 years as a pathologist in the Department of Clinical Pathology - Military Medical Academy (MMA) in Sofia, as well as in the Department of Clinical Pathology in Tokuda Hospital since 2011. She has got a specialty in General and Clinical Pathology since 2008 and has over 17 years of experience in this field. Dr. Fakirova has also worked as a pathologist for 10 years at Pirogov Emergency Institute (1998-2008), in the National Center for Cardiovascular Diseases in Sofia (1997-1998), in the Emergency Room at Tota Venkova Hospital in Gabrovo, and as a research assistant at the Institute of Plant Physiology of BAS.

She is known for having successfully introduced innovative methods in the clinical practice and is a preferred pathologist and cytopathologist both for colleagues in and out of the Military Medical Academy.

Dr. Albena Fakirova has specialized in various clinical pathology clinics in Italy, Denmark, Austria, Romania, and Germany. She takes interest in a wide range of general and clinical pathology, as well as a special interest in biliary and pancreatic pathology, pulmonary and breast diseases. She is an active participant in the work of the MMA Oncology Committee. She has numerous collaborations with clinicians in various scientific forums as well as publications in scientific periodicals in the country and abroad.

Dr. Fakirova is a member of the Bulgarian Society of Pathology and the European Society of Pathology. She is fluent in English and Russian.

Prof. Lothar Pilz

Lung Cancer Diagnosis

Introduction

Categorizing lung cancers into histological types leads to four main diagnostic classes: Squamous cell carcinoma (30% to 40%), adenocarcinoma (25% to 30%), other non-small cell lung carcinoma (less than 10%), and small cell lung carcinoma (15% to 20%), where the first three classes are summarized under non-small cell lung carcinomas. Additionally, more than 30% of all lung cancers show elements of another histological type. Further subdivisions are made in concern of therapy optimization.

Methods and measures

At time of diagnosis disease symptoms, results of lung cancer screening, or accidental findings (e.g., preparation for surgery) may be the leading initial reason. Early symptoms of lung cancer are not very specific, though most of diagnosed patients show some of them. Most frequently are (i) symptoms and findings of endobronchial growth: cough (8% to 75%), hemoptysis (6% to 35%), dyspnea (3% to 60%); (ii) of intrathoracic extension chest: pain (20% to 49%); (iii) of systemic signs of cancer: weight loss (0% to 68%), night sweats, fatigue, fever (0% to 20%); (iv) of distant metastases: bone pain (6% to 25%); and (v) some paraneoplastic syndromes.

Histological confirmation is important for chemo-, targeted, and immuno-therapy. Bronchoscopy detects primary (central) and peripheral tumors with a sensitivity of 0.88 and 0.78, respectively, and give some information for T-staging and cytology samples for N-staging. Used imaging procedures are contrast-enhanced (cranial) CT or MRI; PET and PET-CT; CT or MRI of the liver and adrenals; bone scintigraphy; or ultrasonography.

Staging and molecular profiling

Each patient's case should be discussed within a multidisciplinary team to provide an individualized diagnostic tumor staging with elaborated SOP's. For targeted molecular therapies and immuno-oncology molecular profiling and specific tumor-associated immune contexture as well as liquid biopsy may be part of further diagnostics.

Other measures and screening results will be discussed in greater detail.

Study of Mathematics and Physics 1973 –1978 at the Johann-Wolfgang-von-Goethe-University, Frankfurt and Eidgenössische Technische Hochschule (ETH), Zürich, Switzerland;

1979-1980 Research Assistant, University of Heidelberg, Heidelberg

1981- 2011 Senior Researcher and Consulting Statistician, Department Mathematical Models / Biostatistics, German Cancer Research Center, Heidelberg

Since 2011 Senior Consultant for Statistics, Medical Faculty Mannheim, University of Heidelberg, Mannheim

Since 2013 Appointed Statistical Consultant, Medical University Bialystok, Poland

Prof. Tatiana Hadjieva

Prof. Hadjieva has graduated Medicine in Higher Medical University, Sofia, Bulgaria with an award for primacy. She receive a Postgraduate Speciality in Radiation Oncology and Nuclear Medicine in 1979 and in Oncology - 2000. In 1988 she defended a PhD thesis in Thyroid Carcinoma Treatment, and in 2004 became a Doctor of Medical Sciences, D sc. In 1995 she was habilitated as Associate Professor and in 2005 as Full Professor in the University Radiotherapy Clinic, Medical faculty, Sofia.

Since 1975 she was appointed in UH "Queen Joanna" as junior assistant in Radiotherapy Department and worked there more than 40 years becoming Head of the department and modernizing it to high-tech radiotherapy centre in 2009. Later she moved to organize a new RT Department in the private City Clinic Oncology serving as Head of the department up to August 2017. Now, Prof. Hadjieva is working in UH "St Ivan Rilski in Radiotherapy and Radiosurgery Clinic, Sofia.

Dr. Hadjieva was appreciated as an invited lecturer in Germany, Belgium, Israel, Turkey, Ukraine, Poland etc.

She is the author of more than 120 publications in journals (in English and in Bulgarian), participated as co-author in 40 monographs, guidelines, handbooks and gave over 100 talks on International Congresses and National Meetings.

Prof. Hadjieva has served for many years as an expert in following organisations and committees: National Head and Neck Cancer Treatment Committee 1981-2015; Endocrine Disease Treatment Group 1987-2015; Member of National Committee for Evaluation of Consequences after Chernobyl Accident 1990-1995; Council for Medical Science, Medical University, Sofia, 1998 - 2004 ; National Council for Radiation Protection, Committee of Peaceful Use of Atomic Energy, 2002-2015; Scientific Committee for Roentgenology, Nuclear Medicine, Radiotherapy and Radiobiology at the Council of Ministries from 2005 till the end ; National Representative for Radiation Oncology, Ministry of Healthcare, from 2000-2006 and 2015; National Health Insurance Fund, Responsible for Radiotherapy, since 2001

As member of international societies such as European Society of Nuclear Medicine, ESTRO, ASTRO,BUON, ESMO etc she promotes Bulgarian radiotherapy care abroad.

Dr. Hadjieva is a lecturer for medical and dentists students in several universities in Sofia and Stara Zagora, especially for English students; a senior lecturer and organizer of postgraduate education for Radiation therapy and lecturer in Oncology for different specialties as ENT, surgery, endocrinology, European School of Oncology.

She has been the Head of the State Commission for Radiotherapy licensing for many years.

For all this lifelong doctor and educational work in 2014 Prof. Hadjieva was decorated by Life appreciation "Prof. Chilov's" award for excellence in therapy and education at Medical University, Sofia.

Dr. Nataliya Chilingirova

Targeted Therapies in Lung Cancer. What is New?

Lung cancer is the most common malignant disorder killing more patients than any other malignancy in the world. Non-small cell lung cancer(NSCLC comprising 80% of the lung cancers) remains one of the major public health problems, with very poor prognosis and response rate to treatment and with a 5-year-survival rate of nearly 15%. The discovery of numerous molecular alterations in the last decade has led to the tremendous changes in the treatment moving from standard therapies to new personalized approaches including targeted therapies with specific inhibitor drugs such as the TKIs and monoclonal antibodies. All these highlight the need for a personalized approach in designing a therapeutic strategy for lung cancer patients with any histology and most of all clarify the role of genetic- and pharmacogenetic alterations and overcome targeted- and chemotherapy resistance in order to maximize patients chances for successful treatment. The main goal and challenge of personalized medicine is to improve the efficacy of therapy to promote longer progression-free survival (PFS) of patients. This review will summaries the latest data on targeted therapies in lung cancer.

Dr. Chilingirova graduated Medical University in Sofia, Bulgaria by doing part of her medical training at the Medical Oncology Clinic in the University Hospital in Zurich, Switzerland. Still as a medical student she worked as a volunteer in different oncology centres in the country - National Oncology Centre in Sofia, and the Complex Oncology Centre in Stara Zagora. Right after graduating from MU Sofia, she started her residency at the National Oncology Centre. PhD Thesis: Lung Cancer – individualizing treatment approach using NGS (next-generation sequencing based), a scientific work prepared for the first time in the country. Her scientific interests are mostly lung cancer, sarcomas and rare tumours. She did part of her training at the University Hospital in Vienna and Wilhelminen University Hospital, Vienna. Clinical fellowships at some of the biggest scientific and clinical oncology centres like Memorial Sloan Kettering Cancer. Actively participates in various international clinical trainings, congresses and meetings (ESMO, ELCC etc.). Member of Bulgarian and international societies like ESMO, ASCO, Bulgarian Oncology Educational Academy, Bulgarian Oncology Society. Member of the Executive Board Young Oncologist Club Bulgaria. She became an associate professor of oncology and introduces for the first time oncology as a part of the educational program for all medical students at the university. Member of the Science and research lab for precision medicine in oncology and genetics at the Centre of Competence (a project funded by EU grant). Author of more than 45 scientific papers in Bulgarian and international journals. Speaks German, English and Russian.

Dr. Paolo Castellucci

PET/CT Diagnostics And Follow-up Of Thoracic tumors

Dr Paolo Castellucci
Policlinico S Orsola Malpighi Bologna
Italy.

The use of PET/CT imaging in the work-up and management of patients with thoracic tumors has greatly increased in the past few years. PET/CT combines functional and anatomical information to study various aspects of malignancies, allowing accurate disease staging and providing useful data to characterize indeterminate findings. In many thoracic malignancies, the accuracy of PET/CT has been shown to be greater than other radiological modalities.

The most relevant indications of PET/CT in thoracic malignancies are: staging, therapy monitoring and follow up of malignant mesothelioma; staging, therapy monitoring and follow up of esophageal cancer; characterization and follow up of anterior mediastinal malignancies (especially thymoma and germ cells tumors) and some applications in rare tumors (paraganglioma).

The current applications together with the potential future applications of PET/CT using different radiopharmaceuticals will be summarized and briefly discussed in the presentation.

Academic titles

School of Medicine at the Università degli Studi di Bologna, graduation in Medicine and Surgery

School of Medicine at the Università degli Studi di Bologna, Residency in Nuclear Medicine

School of Medicine at the Università Modena e Reggio: Residency in Medical Radiology

Work experience

December 2002 - present: Dirigente Medico di I livello (registrar) at the Servizio di Medicina Nucleare e Centro PET della Azienda Univeristario Ospedaliera S.Orsola –Malpighi di Bologna. From 2005 Professor at the "Scuola di specializzaizone in medicina nucleare", at the University of Bologna.

March 2001 - December 2002: Dirigente Medico di I livello (registrar) at the Servizio di Medicina Nucleare dell'Ospedale S. Croce e Carle di Cuneo; clinical applications of PET in oncology and cardiology.

November - December 2001: Visiting fellow at the CETIR PET center Barcelona, Spain clinical application of PET in oncology and cardiology (Director Prof. Ignasi Carrió).

January - December 2000: Research fellow at the "Istituto Europeo di Oncologia" (I.E.O.) experience on Radio Target Therapy with 90Y and somatostatin analog (DOTA-TOC) and radioguided surgery (ROLL; SNB) (Director, Dr. Giovanni Paganelli).

June - December 1998: fellow at the Department of Radiology, Service of Nuclear Medicine and PET Center, Hospital of the University of Pennsylvania, Philadelphia (Director, Prof. Abass Alavi).

Skills: Large experience in whole-body PET/CT scan reading using 18F-FDG, 11C-Choline, 11C-Methionine, 11C-Acetate, 68Ga-DOTA-NOC, 18F-DOPA, 11C-Ephedrine, 64Cu-ATSM. The PET centre at the Azienda Ospedaliera S.Orsola–Malpighi, Bologna is provided with 3 PET/CT scanners and the output is about 7000-8000 scans per year.

Brain PET scans in oncology (11C Methionine) or brain disorders (18F-FDG). Large experience in organizing a PET centre. Experience in Radio Target Therapy with somatostatin analog (90Y-dota-TOC). Experience radio guided surgery (sentinel node detection in breast, melanoma, genito-urinary tract and ROLL).

Italian referent for H10 EORTC protocol on the application of PET in Hodgkin Lymphoma.

Member of the EANM group about the application of Choline PET in prostate cancer.

Languages

English: good knowledge of written and spoken language; Portuguese (Brazilian): excellent knowledge of the spoken language; Spanish: fair knowledge of the spoken language.

Publication: Authors and Co-Authors of more than 100 full papers publications in the field of Oncological applications of PET.

Prof. Christian Manegold

Management of Advanced NSCLC: Novel Immuno-Therapeutic Agents

From currently investigated immuno-therapeutic compounds including monoclonal anti-bodies (moAb), therapeutic vaccines or adoptive T-cell transfer, check point inhibitors (ICI) have shown to have the potential to change or to already have changed today`s treatment algorithms for a number of solid tumors, including lung cancers. Several ICI with diversities in nature of the mo Ab (IgG1, IgG2, IgG4) and the biological targets (PD-1, PD-L1, CTLA-4) exist. Precision therapy 2019 for advanced, wild type NSCLC recommends for first-line therapy Ipilimumab/Nivolumab (TMB), Pembrolizumab (PD-L1 ≥ 50%), Pembrolizumab or Atezolizumab in combination with doublet chemotherapy (CT) (PD-L1 any %). Second-line therapy includes ICI as single agent (Nivolumab, Pembrolizumab, Atezolizumab) for non-squamous and squamous tumors. In order to avoid unjustified financial toxicity the identification of treatment predictors for patient selection is key. Unfortunately, the currently used immuno-markers cannot be considered ideal (PD-L1, not very reliable, but the best we momentarily have) or tumor mutation burden (TMB; expensive, and according to recent analyses not recommended). The combination of anti-angiogenic agents and ICI seems very attractive because of its pre-clinical rationale and some clinical information that the addition of Atezolizumab to Bevacizumab combined with CT improves

significantly survival regardless of PD-L1 expression and EGFR/ALK alterations (Impower 150). For locally advanced, unresectable NSCLC consolidation Durvalumab has been approved following standard CT/RT. Data from pivotal trials underlining evidence based management of ICI will be presented together with clinical cases discussing the diagnosis of uncommon responses (pseudoprogression, hyperprogressive disease) and the management of specific ICI related toxicities.

Dr. Christian Manegold, studied medicine in Berlin and Heidelberg, Germany, graduating with a Dr. from of the Ruprecht Karls University in Heidelberg in 1974. He took up a residency in the pathology department of the same university in 1976 and worked in the USA for 3 years, before returning to Heidelberg in 1979. He gained board certification in internal medicine and in haematology/oncology in 1985 and 1986, followed by a professional appointment as Consultant in Haematology/Oncology at the Thoracic Hospital in Heidelberg, and Head of Interdisciplinary Thoracic Oncology at the Department of Surgery, Heidelberg Medical Centre Mannheim, Germany, a post he held from 2004 to 2013. He was appointed Professor at Ruprecht Karls University in Heidelberg in 1996. He has been the Senior Advisor at the Interdisciplinary Cancer Centre in Mannheim since 2013. Professor Manegold has extensive experience as a clinical investigator, and national and international trial leader as well as a member or leader of independent data monitoring committees (IDMC) in numerous clinical trials in oncology, both in thoracic cancers and other indications. Professor Manegold is a member of the German Cancer Society, the European Society of Medical Oncology (ESMO), the American Society of Clinical Oncology (ASCO), and the International Association for the Study of Lung Cancer (IASLC). He was a Chairman of the European Organisation for Research and Treatment of Cancer Lung Cancer Group (EORTC-LCG) from 2000 to 2003. He served as a Chairman of the IASLC Ethics/Sponsorship Committee from 2007 to 2009 and as member of the IASLC Board of Directors from 2011 to 2015.

Dr. Yang Xia

The Contribution of EGFR Mutation to the Therapeutic Efficiency of Immune Checkpoint Blockade in NSCLC

Yang Xia MD,PhD
Department of Respiratory and Critical Care Medicine
Second Affiliated Hospital of Zhejiang University School of Medicine

Targeted therapies are efficient in the context of oncogenic driver mutations. Epidermal growth factor receptor (EGFR) mutant lung cancers represent a distinct subset of non-small-cell lung cancer (NSCLC), which confer dramatic sensitivity

to EGFR tyrosine kinase inhibitors (TKIs). Despite the high response rate of EGFR TKIs in EGFR mutant lung cancer, resistance and tumor recurrence is unavoidable. Therapeutic options are restrained in patients after exhaustion of targeted therapies. Immune checkpoint inhibitors (ICIs) are novel standard therapy for advanced NSCLC with significant overall survival benefit in registration trials. No superiority in terms of long-term survival was consistently observed in EGFR mutation subgroup when ICIs were given as monotherapy at second line from early studies. Thus, the appropriate application of ICIs to patients harboring EGFR mutations remains an important field of ongoing research. Here, we discuss the different strategies of immune checkpoint blockade, including ICIs alone, in combination with TKIs, chemotherapy, as well as anti-angiogenic agents in EGFR mutant NSCLC at front and back lines, respectively. We also summarize the evidence concerning the molecularly heterogeneous features of EGFR mutations and the associations with the outcome of ICIs therapy. We aim to improve understanding of the optional mode of immune-based treatment approaches in EGFR mutant NSCLC.

EDUCATION

Southern Medical University, Guangzhou, China
September 2009 - June 2014 - Ph.D. in Pulmonary Medicine
June 2011 – August 2013 - Joint Training Program with Division of Pulmonary and Critical Care Medicine, Johns Hopkins University, Maryland, U. S. A.
September 2004 - June 2009 - M.D.

RESEARCH TRAINING EXPERIENCE

May 2011 - August 2013 - Division of Pulmonary and Critical Care Medicine, Johns Hopkins University, Trainee
September 2009 - May 2011 - Chronic Airways Diseases Laboratory, Nanfang Hospital, Southern Medical University, Post-graduate Student

FUNDING

2016/01-2018/12 Principal Investigator, National Natural Science Foundation of China award entitled “The Role of TRPV4 in HDM-induced Epithelium Dysfunction in Asthma” (81500012)

2016/01-2018/12 Principal Investigator, Medical and Health Technology Program of Zhejiang Province award entitled “The Contribution of Receptor-operated Calcium Entry in the Dysfunction of Epithelium in Asthma” (LQ16H010001)

2017/01-2019/12 Principal Investigator, Medical and Health Technology Program of Zhejiang Province award entitled “Bronchial Genomic Classifier for the Diagnostic Evaluation of Lung Cancer in Chinese Population” (2017204226)

2019/01-2023/12 Principal Investigator, National Natural Science Foundation of China award entitled “CYP epoxygenase induced EET activates airway TRPV4 channel to facilitate the development of asthma” (81870022)

PUBLICATIONS

He has more than 25 publications on various types of pulmonary diseases of inflammatory, vascular, and oncological origin.

Dr. Antoaneta Tomova

Dr. Tomova will present the current landscape and role of denosumab in the management of bone disease in patients with breast cancer. Key points: Bone metastases are common in breast cancer. If patients with metastatic cancer are left untreated with a bone-targeting agent, nearly half will go on to develop an SRE.In these untreated patients, the average number of SREs per patient per year ranges from approximately 1.47 in patients with prostate cancer to 3.70 in patients with breast cancer.

Results from an international, randomized, double-blind, double-dummy, active-controlled study of SC denosumab versus IV zoledronic acid for the treatment of bone metastases in breast cancer patients and involved 322 centers in Europe, North America, South America, Japan, Australia, India and South Africa are presented. Patients were randomized to: SC injection of denosumab 120 mg and an IV infusion of placebo every 4 weeks or IV zoledronic acid 4 mg and SC placebo every 4 weeks

Daily supplementation with calcium (≥500 mg) and vitamin D (≥400 U) was strongly recommended.

Exploratory endpoints included overall survival, disease progression, skeletal morbidity rate and percent change from baseline to week 13 in urinary NTx (uNTx) and bone-specific alkaline phosphatase levels. Patient characteristics were generally balanced between the study groups.

SC denosumab significantly delayed time to first on-study SRE by 18% versus IV zoledronic acid (hazard ratio [HR], 0.82; 95% confidence interval [CI], 0.71-0.95; P<0.001 Non-inferiority; P=0.01 Superiority.). The treatment effect of SC denosumab was consistent over time.

Median time to first on-study SRE was 26.4 months for the IV zoledronic acid group and has not yet been reached for the SC denosumab group. SC denosumab significantly delayed time to first on-study SRE by 18% versus IV zoledronic acid (HR, 0.82; 95% CI, 0.71-0.95; P<0.001 Non-inferiority; P=0.01 Superiority). Denosumab reduced the risk of developing multiple SREs (time to first and subsequent SREs) by 23% versus IV zoledronic acid (rate ratio, 0.77; 95% CI, 0.66-0.89; P=0.001).

Denosumab reduced the mean skeletal morbidity rate by 22% compared with IV zoledronic acid (0.45 events versus 0.58 events per patient per year for SC denosumab and IV zoledronic acid, respectively; P=0.004).

Denosumab was more efficacious than zoledronic acid in Preventing or delaying SREs, Maintaining quality of life. Beyond these clinical benefits, treatment with denosumab reduces the risks of renal toxicity and acute-phase reactions, provides the convenience of subcutaneous administration.

Denosumab offers an efficacious and well tolerated treatment option for preventing skeletal complications in patients with breast cancer and bone metastases.

The results support the use of denosumab as an effective novel treatment option for the management of bone metastases in breast cancer patients.

Dr. Antoaneta Tomova is a specialist in medical oncology from Plovdiv, Bulgaria. She is currently the Head of the First Chemotherapy Department of Plovdiv Complex Oncology Centre.

Dr. Tomova has graduated the Medical University in Sofia in 1985. She has dedicated more than 25 years to medical oncology and chemotherapy. Her main areas of expertise are in the fields of medical oncology, palliative care, pain management, and symptom control.

Dr. Tomova has attended more than 60 specialized courses abroad so far. She is a member of Bulgarian Cancer Society, BUON, UICC, ESMO and ASCO, where she has presented a poster. She was named Doctor of the Year in 2009 from the National Association of Patient with Oncology Diseases, and was voted The Doctor Whom Patients Trust in 2012.

Dr. Tomova speaks 2 foreign languages - English and Russian.

Assoc.Prof. Nataliya Chilingirova

Evolving the Treatment Practice of Advanced EGFRm NSCLC

Assoc.Prof. N. Chilingirova

EGFR-TKIs, such as gefitinib, erlotinib, and afatinib, are the standard first-line therapy for patients with EGFR - mutant NSCLC. However, resistance develops in most patients after 1 year of treatment, and new treatment strategies have been tested to improve the efficacy of first-line treatment. Osimertinib(TAGRISSO) is an oral central nervous system (CNS)-active, irreversible third-generation EGFR-TKI selective for sensitizing both EGFR and T790M mutations, with low activity on EGFR wild type. In the randomized phase III FLAURA trial (N=556), TAGRISSO significantly improve PFS (median 18.9 versus 10.0 months [HR = 0.46, 95% CI: 0.37–0.57, p < 0.001]) compared with the SoC first-generation EGFR TKIs (erlotinib or gefitinib). In FLAURA trial TAGRISSO (osimertinib) showed statistically significant and clinically meaningful improvement in OS (median 38.6 versus 31.8 months [HR = 0.79, 95% CI: 0.641, 0.997; p=0.0462]) compared with the SoC first-generation EGFR TKIs (erlotinib or gefitinib). TAGRISSO (osimertinib) is the first EGFR-TKI monotherapy to show statistically significant OS benefit versus another EGFR-TKI, which position osimertinib as the new standard of care for first-line treatment of patients with EGFRm advanced NSCLC.

Dr. Sofia Baka

Dr Baka, is Consultant, Medical Oncologist and works at the Interbalcan Medical Center of Thessaloniki, Greece. She is the Director of the Medical Oncology Department-Clinical Research Unit. She has graduated from the Medical School of the Aristotle University of Thessaloniki in 1993, and completed her Specialist Training in Internal Medicine in 2001, at the Hippocration University Hospital of Thessaloniki.

Following, her PhD, on lung cancer immunotherapy, from the Biology Department of Aristotle University, Medical School, Dr Baka has worked as Clinical Research Registrar and Specialist Registrar in Medical Oncology, for 5 years, at the Christie Hospital in Manchester and completed her Specialist Training in Oncology (CCST). During that time she has attended the Master Course in Oncology, University of Manchester. He has written several papers in major scientific medical journals. Dr Baka has participated as Principal or Co-Investigator in several clinical trials.

Poster Session

Med. Phys. Milena Dimcheva

99mTc - Flood Phantom for Body Contouring in lymphoscintigraphy

M. Dimcheva, A. Jovanovska, S. Sergieva
Department of Nuclear Medicine, Sofia Cancer Center, Sofia, BULGARIA

Background and aims: Lymphoscintigraphy is a nuclear medicine procedure that is used to detect sentinel lymph nodes (SLNs) and is recommended to be performed before surgery. A disadvantage of lymphoscintigraphic studies is the absence of anatomic information in the images. The most common localization method for breast lymphoscintigraphy is the use of a low Co-57 activity sheet source for body contouring. Drawbacks include a high radiation dose to the patient and staff and limitation to a single view with a Co-57 source placed under the imaging bed. The aim of this study is to present the newly developed Tc-99m flood phantom allowing imaging at each acquisition time point images: anterior, lateral, and 45° anterior oblique in patients with SLN in breast carcinoma and patients with clinically localized melanoma. Methods: A dual-head gamma-camera system with large field-of-view (FOV) detectors were used to acquire planar emission and, if desired, single-photon computed tomographic (SPECT) or SPECT/CT images. Low energy, high-resolution (LEHR) collimators were used. The acrylic phantom was used for body contouring to offer an accurate localization of the SLNs. The phantom was filled with a homogenous solution of 37 MBq Tc-99m pertechnetate. The phantom was placed on the lower camera head of a dual-head camera, underneath the patient to offer a transmission planar uniform flood source, and an anterior body outline image was acquired on the upper head. Lateral images are also acquired with the patient lying supine, with her/his arm on the side with cancer (R/L) extended. The SLN procedure was initiated the day before surgery using a preoperative 0.2-mL intradermal injection of 99mTc Nanocolloid (74–148 MBq) Results: With the use of a 99mTc flood phantom, it was possible to obtain transmission images in all positions. The sentinel lymph nodes were detected in 82 cases and confirmed with the Surgical gamma probe – Europrobe 3 during the surgical procedure. Conclusion: Presurgical localizing of the sentinel nodes has become more accurate and is being performed with greater confidence with the new 99mTc flood phantom for outline body imaging technique. The overall sensitivity of the study for visualization remains the same as the other phantoms, but the presentation is far superior and informative. The new phantom used in our department does not affect the acquisition data and does not lead to false-negative results.

Keywords: sentinel lymph node biopsy, breast tumor, 99mTc flood phantom

Dr. Blagovesta Geneva

Review of a scientific report
Single-center Study on Prevalence of Germ-line Mutations in BRCA 1/2 in Patients and Therapeutic Implications

Authors: Bl. Geneva, I. Kazmukov, St. Panayotova, Y. Marincheva, N. Kisselkov, Kr. Nikolov

Advances in molecular diagnostics lead to identification of key gene drivers and mutations that may be crucial in some diseases. During the last decade high grade epithelial ovarian cancers were described more comprehensively. It is well known that they are more likely to be discovered in patients, carriers of germ-line mutations in BRCA 1/2.

In Bulgaria genetic testing of peripheral blood is available less than 5 years and thus germ-line mutations prevalence is still not described. Testing of tumor tissue for somatic mutations in BRCA 1/2 in Bulgaria is still not routinely done.

We aimed to study our population of patients with high-grade epithelial ovarian cancer, tested for germ-line mutations in BRCA 1/2 for a period of 1 year (2017). All patients were treated at the Complex Oncological Center, Burgas. We describe the patient selection for genetic testing, the results of the mutational analyses and our treatment approach. We describe the most frequent mutations detected as well as potential correlations with survival. We summarize data on treatment with PARP inhibitors and survival parameters of this cohort.

Dr. Blagovesta Geneva graduated from the Medical University – Stara Zagora in 2015 and started specializing Medical oncology at the Complex Oncological Center – Burgas. She is a member of ESMO, ESO and the Young oncologist Club in Bulgaria.

She is interested in gynecological cancers and hereditary syndromes and she is involved in several projects, related to diagnosis and follow-up of these conditions in oncology. Her clinical career is guided by Prof. Timcheva and directly mentored by Dr. Krassimir Nikolov. She also co-authored several publications and scientific reports.

Dr. Ivan Kazmukov

Review of a scientific report: Preoperative Systemic Treatment in Gastric Cancer in Bulgaria – Understood or Underused?

Authors: I.Kazmukov1, Kr. Nikolov1, B. Geneva1, S. Panayotova1, Y. Marincheva1, N. Kiselkov1, M. Vasileva-Slaveva2

Affiliation:

1. Complex Oncological Center, Burgas
2. Alexandrovska University Hospital, Sofia

Management of gastric cancer in Bulgaria still relies on initial surgery, followed by postoperative systemic treatment. Despite previous reports, preoperative chemotherapy is largely omitted and the surgical approach to patients with gastric cancer frequently consists of open laparotomy. It is the first modality for the treatment of patients with non-metastatic gastric cancer, taking away all potential benefits of preoperative/neoadjuvant systemic treatment.

We present a case report of a patient with locoregionally advanced gastric cancer. The diagnostic and systemic treatment management was held in Complex Oncological Center - Burgas and the patient was subsequently referred to surgery and was submitted to the first laparoscopic gastrectomy with D2 lymph node dissection in Bulgaria.

We discuss potential issues and obstacles in the diagnosis and the treatment of gastric cancer patients as well as we emphasize on the multidisciplinary approach and positive effects of good collaboration practices between oncological specialists and institutions.

Dr. Ivan Kazmukov graduated from the Medical University – Varna in 2018. He is currently a first-year resident in Medical Oncology at the Medical Oncology Department, Complex Oncological Center - Burgas. He is a member of ESO, Bulgarian association for cancer Research (BACR) and the Young oncologist Club in Bulgaria. Despite his initial steps in Oncology he started active participation in several projects, run in his department under the mentorship of Dr. Konsoulova. He also co-authored several publications and scientific reports in Bulgarian and International peer-review journals and conferences.

His interests are related to gastrointestinal tumors as well as to genitourinary, thoracic tumors, breast cancer, cancers of unknown primary, neuro-oncology and immunotherapy.

Dr. Tsvetan Tatarov

Follow-up Care of Patients with Prostate Carcinoma on Zytiga and Xtandi at “Uni Hospital” from March 2018 to September 2019

Dr. T. Tatarov, Dr. I. Stoyanova, Dr.S. Velchova, Dr. R. Krasteva

Prostate cancer is the most common malignant disease affecting men and represents the fifth most frequent cause of death in men overall. Early diagnosis, regular PSA screening and adequate treatment, relative to the characteristics of each patient, are of paramount importance. The current article deals with the follow-up care of patients with prostate cancer, treated in “Uni Hospital”, and presents clinical data for their condition between March, 2018 and September, 2019. The results cover patients undergoing treatment with Xtandi and Zytiga.

Xtandi is offered to patients with high-risk non-metastatic prostate cancer and metastatic castration-resistant prostate cancer. Zytiga is offered to patients with castration-resistant prostate cancer and hormone-refractory prostate cancer unresponsive to androgen deprivation or antiandrogen therapy. The changes in the patients' quality of life are observed, as well as the potential adverse drug reactions and the therapeutic response to the given treatment.

Dr. Tsvetelina Paycheva

Neoadjuvant Endocrine Treatment in Breast Cancer – Are We Ready for It?

Authors: Ts. Paycheva1, M. Vasileva-Slaveva2, Sv. Maslyankov2, Y. Marincheva3, N. Kisselkov3, A. Konsoulova3

Affiliations:

1. Medical Faculty of Sofia University, Sofia
2. Alexandrovska University Hospital, Sofia
3. Complex Oncological center, Burgas

We present and discuss a case of s postmenopausal 65-year old woman who palpated a 4 cm solid tumor in the median lower quadrant of the left breast. On mammography, the formation was hardly visible and measured 30/20 mm. The patient had undergone prior screening mammography one year earlier, which was negative. A core-needle biopsy of the lesion was done and it showed a classic G2 invasive lobular carcinoma, ER 7/8; PR+ 3/8; HER2 – 1+ (negative), Ki 67-5%.

The patient was referred to MRI which was done 5 days after the biopsy and the formation measured 40/30 mm. There was no axillary or parasternal lymph node involvement. There was no spread of the disease after staging with abdominal ultrasound, bone scintigraphy and chest radiograph. The tumor was thus staged as cT2 cN0 cM0 G2. The primary tumor was marked with a clip and neoadjuvant approach was initiated with endocrine treatment with Letrozole.

We discuss the management and the pitfalls that occurred in this case. We also focus on the importance of initial tumor biopsy and information for the tumor biology for the management of patients with breast cancer

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Dr. Tsvetelina Paycheva graduated from the Medical Faculty of Sofia University, Bulgaria in 2019. During her studies she has always been interested in surgery and more particularly in Oncologic surgery. In order to be introduced to the field, she started attending workshops for students as well as educational courses of ESO and ESMO since 2016. She became a member of Young oncologist Club in Bulgaria, ESMO, ASCO and EUROSURG and is currently started practicing at the Clinic of Surgery in Alexandrovska University hospital in Sofia.

She has written 2 full text papers, one of which is in process of publication in a peer-review journal. She also co-authored other publications as well as conference scientific reports. She also took active participation in several projects, run in the department under the mentorship of Dr. Mariela Vasileva and Assoc. Prof. Dr. Svilen Maslyankov.

Notes

Dr. Aleksandar Gerasimov

Aleksandar Gerasimov was born in 1987 in Vratsa. He graduated the Medical University in 2012 with honors. He started working in the Clinic of Medical Oncology at the University Hospital for Active Treatment in Oncology, Sofia in 2012 as a scientific assistant. Dr. Gerasimov started his post-graduate study in Medical oncology in 2013. His scientific interests are in the fields of prostate cancer, breast cancer, neuroendocrine tumors. He specialized NET in Uppsala, Sweden in 2014 and Jerusalem, Israel in 2017. He did an internship in Breast cancer center of excellence in Instituto Europeo di Oncologia, Milan, Italy in 2016. Dr. Gerasimov is preparing dissertation for PHD in the fields of prostate and breast cancer.

Dr. Veneta Stoykova

Dr. Veneta Stoykova is a gynecologist who works in SBALAG Maichin Dom in Sofia, Bulgaria and is also a university lecturer in the same hospital.

Dr. Stoykova graduated the Medical University in Sofia in 2002 and specialized in Obstetrics and Gynecology in the period 2003-2008. She got her specialty in August 2008 and later on acquired a Doctor's degree in Obstetrics and Gynecology in February 2012. In 2015, Dr. Stoykova graduated the Medical University in Sofia with a second specialty - Health Management and Public Healthcare.

Dr. Veneta Stoykova started her career as a doctor in the emergency department of Sofia region. Later on, she moved to MBAL Vita, where she worked for 2 years from 2004 to 2006. She has also had a 7-year experience working as a doctor in St. Dimitar Medical Centre (2008-2015). Dr. Stoykova is a member of Bulgarian Medical Association, Bulgarian Scientific Society of Obstetrics and Gynecology, ISUOG, etc. She has more than 13 specializations and training courses in different clinics in Portugal, Greece, the Netherlands, UK, Italy, Serbia, and Bulgaria.

Dr. Veneta Radostinova Stoykova speaks Russian and English as foreign languages.

Dr. Qaisar Siraj

Sentinel Node Dissection and PET/CT Diagnostics in Breast Cancer

QAISAR H. SIRAJ

Department of Nuclear Medicine, Farwaniya Hospital Kuwait

In patients with breast cancer regional lymph node dissection is recommended for patients with clinically suspicious nodes or pathologically proven nodal metastases but leads to unnecessary morbidity in patients without nodal involvement. The advent of sentinel lymph node (SLN) imaging and dissection, has now led to selective dissection of sentinel node(s) in the affected lymphatic basins. If the SLN is free of tumour, then it is highly unlikely that subsequent nodes along the same pathway will contain metastasis. Complete nodal dissection can therefore be replaced by the less aggressive selective resection of the SLNs only in an affected lymphatic basin. Axillary nodal status is the most powerful prognostic factor predicting recurrence and survival in breast cancer. Axillary node dissection (AND), the staging procedure to determine systemic spread, has been supplanted by SLNB procedure in patients with early-stage biopsy-proven breast carcinoma without cytologically or histologically proven axillary lymph node metastases for which removal of primary tumour and axillary node dissection would be indicated. SLN imaging and biopsy is now the de facto standard-of-care in breast cancer patients. Pre-operative lymphoscintigraphic imaging is highly recommended as it improves accuracy, reduces morbidity and allows speedy identification of SLN. Indications for SLNB have been extended to encompass most patients with non-metastatic breast cancer.

Positron Emission Tomography with Computed Tomography (PET/CT) is increasingly becoming a credible method for investigating patients with breast cancers. This hybrid structural-functional imaging technique allows examination of extraaxillary nodes, chest, abdomen, and bone in a single session. Despite its many distinct advantages, the limited spatial resolution of the technique results in a lower sensitivity for the detection of very small tumours and the heterogeneity of metabolic activity in the primary tumours curtail its widespread use. However, recent developments in instrumentation and the introduction of new receptor-specific PET radiotracers have considerably improved the diagnostic yield of this combination technique in the primary diagnosis, and for staging and follow-up. The higher resolution of the dedicated positron-emission mammography PEM) systems now allow early detection of very small primary breast tumours even in patients with dense breasts and in younger patients. Though currently not recommended for the staging of early breast cancer without nodal disease, an initial PET/CT may be useful when there is a high risk of metastases. PET/CT is valuable in staging patients with locally advanced breast cancer, and there is increasing evidence for a substantial yield of PET/CT in stage IIB and IIIA breast cancers. PET/CT may replace conventional imaging methods for staging and is useful for detecting recurrence and for restaging.

CURRENT PROFESSIONAL APPOINTMENTS

- Consultant in Nuclear Medicine & PET-CT: Farwania Hospital Kuwait & Molecular Imaging Centre Kuwait
- Examiner Asian Board of Nuclear Medicine: Asian School of Nuclear Medicine
- Editor-in-Chief/Founding Editor: Pakistan Journal of Nuclear Medicine
- Associate Editor: Asia Oceanic Journal of Nuclear Medicine & Biology

MEDICAL EDUCATION

Ph.D in Nuclear Medicine, 1993

Royal Free Hospital School of Medicine, University of London

M.Sc in Nuclear Medicine, 1984

Royal Free Hospital School of Medicine, University of London

Grading in Nuclear Medicine 1982, AFM College, Rawalpindi

Bachelor of Medicine & Surgery, M.B;B.S, 1977, Dow Medical College, Karachi University

AWARDS & HONOURS

- Prize for Scientific Posters, Gulf Nuclear Medicine Conference 2013
- Chairman's Award for Excellence, Portsmouth Hospitals NHS Trust, 2005
- Clinical Excellence Award (Level 4), Portsmouth Hospitals NHS Trust 2005
- Clinical Excellence Award (Level 3), Portsmouth Hospitals NHS Trust 2003
- Distinguished Alumnus, Dow Medical University, Karachi, 2004
- Best Poster Award, British Nuclear Medicine Society, 2001
- Distinction Award, Best publication, Society of Nuclear Medicine, 1997
- Distinction Award for Ph.D thesis, University of London, 1993.
- Travelling Fellowship, British Nuclear Medicine Society, 1991

PROFESSIONAL EXPERIENCE (Past 10 Years)

Consultant in Nuclear Medicine & PET-CT, Farwaniya Hospital, 2011- present

Hon. Consultant in Nuclear Medicine & PET-CT, University College Hospital,

Consultant in Nuclear Medicine, King Fahad Specialist Hospital, Dammam, 2009-2010

Consultant & Lead Clinician in Nuclear Medicine, Portsmouth Hospitals, UK, 1999-2009

Locum Consultant in Nuclear Medicine, St. Peter's Hospital Chertsey, UK, 1999

Locum Consultant in Nuclear Medicine, Great Ormond Street Hospita, Uk, 1998-1999

Locum Consultant in Nuclear Medicine, Addenbrooke's Hospital, Cambridge, 1998-1999

Locum Consultant in Nuclear Medicine, Charing Cross Hospital, London, 1997-1998

Senior Research Associate, UMDS (Guy's & St. Thomas's Hospitals), London, 1997-1998

Visiting Consultant, St. Bartholomew's Hospital, London, 1996-1997

Consultant in Nuclear Medicine, Nuclear Medical Centre, AFIP, Rawalpindi, 1995-1996

L. Consultant in Nuclear Medicine (NHS sessions 4), Charing Cross Hospital,London, 1993-1994

Consultant in Nuclear Medicine (NHS sessions 2), Royal London Hospital,1993-1994

Consultant in Nuclear Medicine (NHS sessions 4), St. Bartholomew's Hospital, London, 1993-1994

Dr. Qaisar H. Siraj has more than 74 scientific publications – editorilas, book chapters and articles in journals like Lancet, Journal of Nuclear Medicine, European Journal of Nuclear Medicine Technology, Journal of Rheumatology, Journal of Pakistan Medical Association, etc.

Dr. Petya Balikova

Dr. Petya Balikova is a resident at the department of Medical Oncology in University Hospital Tsaritsa Yoanna ISUL – Sofia, Bulgaria. She has been working there since 2015. Dr. Balikova graduated with distinction from Plovdiv Medical University – Plovdiv, Bulgaria.

She has interests in internal medicine, oncology and oncodermatology.

Dr. Petya Balikova is dedicated to her patients and is very passionate about doing research work in immunotherapy and targeted therapy as the future of cancer treatment.

Dr. Justinas Besusparis

The Assessment of the Breast Cancer Proliferation Rate and Its Intratumor Heterogeneity Using Digital Immunohistochemistry Methods

Justinas Besusparis 1,2, Benoit Plancoulaine1,3, Paulette Herlin 1, Allan Rasmusson1,2, Renaldas Augulis 1,2, Aida Laurinaviciene 1,2, Arvydas Laurinavicius 1,2

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3 Normandie Univ, UNICAEN, INSERM, ANTICIPE, 14000 Caen, France.

Treatment decisions for breast cancer are significantly influenced by an accurate assessment of the tumor proliferation rate measured by Ki67 immunohistochemistry. A visual estimation of Ki67 which is commonly used in current clinical practice, has serious limitations due to a low reproducibility among the pathologists, intra-tumoral heterogeneity and a lack of standardized recommendations for manual Ki67 evaluation. The most unique and significant benefit for pathology practice and research can be expected from digital image analysis (DIA) applications which provides more accurate and reproducible measurements for tissue-based diagnosis, prognosis and prediction.

We performed DIA on whole-slide images (WSI) of surgically removed Ki67stained breast cancer specimens (3 different patient cohorts: n=164, n=302, n=152). The WSI DIA-generated data were subsampled by hexagonal tiling (HexT). Distribution, texture and heterogeneity parameters were compared to Ki67 reference values, pathology report data and patient overall survival. Criterion standard (Ki67 value) was obtained by counting positive and negative tumor cell profiles using a stereology grid.

In this study we prove that Ki67 labelling index obtained by digital image analysis outperforms visual estimates, taking manual stereological counts as a reference value. A novel methodology for comprehensive Ki67 proliferative activity quantification and heterogeneity assessment, based on the systematic subsampling of digital image analysis generated data into a hexagonal tiles was developed. This approach enables the computation of texture and spatial distribution indicators for Ki67 intra-tumor variability and to visualize Ki67 LI intra-tissue heterogeneity in the whole slide image along with an automated detection and quantitative evaluation of Ki67

hotspots. Hexagonal tiling data provide a useful model for establishing tissue sampling requirements for biomarker studies and visual estimations, which depend on intra-tissue heterogeneity and must be determined on a peruse basis. The spatial heterogeneity indicators of proliferative tumor activity, measured by the digital image analysis of Ki67 expression and analyzed by the hexagonal tiling approach, can serve as an independent prognostic indicator of overall survival in breast cancer patients and outperform the prognostic power of the level of proliferative activity.

Justinas Besusparis is a practicing pathologist, working at the National Center of Pathology, Affiliate of Vilnius University Hospital Santaros Clinics. His fields of interest include breast, lung, kidney, central nervous system pathology, applications of digital image analysis for routine pathology and research.

He received his MD degree from Vilnius University Faculty of Medicine (2006-2012), graduated pathology residency in 2016. He defended PhD thesis (2018) which was focused on digital image analysis applications for Ki67 labeling index estimation and its intra-tissue heterogeneity measurements in breast cancer, aiming to improve the prognostic value of Ki67 immunohistochemistry. He participates in various cancer research projects, has an experience in image analysis processing software and other methodologies of digital image analysis. He is a co-author of the concept of comprehensive immunohistochemistry and applied his experience of digital image analysis validation procedures during the secondment in Nottingham University, UK in 2017

Dr. Yordan Yordanov

Breast Implant-Associated Anaplastic Large Cell Lymphoma (BIA-ALCL): How to Deal With?

Breast Implant-Associated Anaplastic Large Cell Lymphoma (BIA-ALCL) is a rare spectrum of disease that can range from an indolent accumulation of fluids around the breast implant (seroma) to a potentially metastatic T-cell lymphoma especially when there are delays in diagnosis.

The risk of developing BIA-ALCL is 1: 3 817 to 1: 30 000 according to the latest FDA statement and it can be further explained by the texture grade of the implants. To date, in global databases, there has not been a confirmed case of smooth implant only. Beside the surface texturization of the implants, chronic bacterial- inflammation, genetic predisposition and time are factors that could be also related to the onset of the disease.

The first symptom of BIA-ALCL is usually a swelling of the breast due to a seroma formation between 2 to 28 years after the insertion of textured breast implants, with an average of about 8 years after implantation. The fluid can cause the breast to enlarge significantly over a period of days or weeks. It can also present as a lump in the breast or armpit, firmness of the breast, or pain.

Diagnosis is based on an ultrasound scan and if fluid is detected, it should be drained and tested for cytology and CD30 immunohistochemistry. Mammograms are not useful in diagnosing BIA-ALCL. In confirmed cases PET or MRI/CT scans may be used to help stage the disease.

Current recommendations for the treatment of BIA-ALCL call for bilateral capsulectomy and removal of the old breast implants. Smooth implants can be put back in or the patient can choose not to have implants. In all early stage cases, the disease has been fully resolved by this surgery alone and the majority of patients require no additional treatment. However, if the disease has spread to lymph nodes or grown into the adjacent tissues, chemotherapy and radiation may be necessary.

A special emphasis is put on the BIA-ALCL issue in Bulgaria where it still remains not well known.

Dr. Yordan Yordanov is a Board-Certified plastic surgeon practicing in Sofia, Bulgaria. He performs all types of plastic surgery with special focus on facial and breast aesthetic and reconstructive surgery.

Dr. Yordanov has a PhD degree cum laude in plastic surgery with European Mention by the Complutense University-Madrid, Spain. He is a fellow of the European board of Plastic Reconstructive and Aesthetic Surgery (EBOPRAS) and a member of the Spanish Society of Plastic Reconstructive and Aesthetic Surgery (SECPRE), the American Society for Aesthetic Plastic Surgery (ASAPS) and the American Society of Plastic Surgeons (ASPS).

Dr. Yordanov has been trained in Spain, Belgium, and the USA. He is an author of over 50 scientific articles in national and internationally renowned journals, two monographs and a co-author in a Plastic Surgery manual book for students in Spanish. He is a trainer and lecturer in numerous national and international meetings, congresses and educational events.

Dr. Emilija Janevik

The Powerful of Ga-68 - Generator and Cyclotron Based Production Initiate Development of New Radiopharmaceuticals and Increase Clinical Interest

Emilija Janevik
Faculty of medical Sciences, Goce Delcev University Stip, Republic of North Macedonia

This paper presents the prospects of the 68Ga-based radiopharmaceutical development on the basis of the current status of these aspects.

Gallium-68 is a positron emitter radionuclide conveniently produced from a germanium-68/gallium-68 (68Ge/ 68Ga) generator making it available at nuclear medicine centres that do not have cyclotron.

The great interest in clinical use was the reason to start small cyclotron production of 68Ga by bombardment by protons on an enriched 68Zn or natZn target, since the nuclear reaction of 68Zn (p, n) 68Ga has a high cross-section of up to 1 b in the energy range of 11–14 MeV.

68Ga-based radiopharmaceutical has been widely used in the diagnosis of various malignancies in humans during the last years and is currently dominated by 68Ga-labeled somatostatin receptor analogous (SSAs) for the molecular imaging of neuroendocrine tumors (NETs)

PET/CT imaging using somatostatin ligand analogues [68Ga]Ga-DOTA-TATE, [68Ga]Ga-DOTA-TOC, and [68Ga]Ga-DOTA-NOC has become a new golden standard in imaging of NETs allows staging with high accuracy and used to qualify patients for radionuclide therapy. On the other hand, 68Ga-PSMA-11 is performed well for the localization of metastatic prostate cancer at initial staging and at the time of biochemical recurrence.

The recent development of quinoline-based PET tracers that act as fibroblast-activation-protein inhibitors (FAPIs) demonstrated promising preclinical and clinical results. FAP is overexpressed by cancer-associated fibroblasts of several tumor entities.

The development of theranostic pairs comprising somatostatin receptor (SSTR)-targeting nuclear imaging probes of 68Ga and therapeutic radiopharmaceuticals labeled with 90Y and 177Lu for the treatment of patients with neuroendocrine tumors (NETs) has been a driving force behind this development.

Future development of the 68Ga-radiopharmaceuticals must be put in the context of several aspects such as role of PET in nuclear medicine, unmet medical needs, identification of new biomarkers, targets and corresponding ligands, production and availability of 68Ga, automation of the radiopharmaceutical production, progress of positron emission tomography technologies and image analysis methodologies for improved quantitation accuracy, PET radiopharmaceutical regulations as well as advances in radiopharmaceutical chemistry.

Full professor in Pharmacy, Faculty of Medical Sciences, Goce Delcev University, Stip, Specialist in Pharmaceutical Technology.

Teaching in Pharmaceutical Chemistry, Radiopharmacy, Drug Design and Development and Introducing Good Manufacturing Practice in graduate, post-graduate and doctoral studies and health care specialities in Pharmacy.

Vice-Rector for Education from 2010-2015.

Responsible for University Laboratory for Radiopharmacy and Coordinator of the study program in Pharmacy at the Faculty of Medical Sciences.

Working in the field of Radiopharmacy since 1987, starting with SPECT/99mTc radiopharmaceuticals and therapy and from 2009 in PET as the main coordinator of the project for establishing first PET centre and production site in the country and director until 2018.

Research activities are related mostly to the development of SPECT, PET and theranostic protein and peptide-based radiopharmaceuticals, preclinical studies introducing animal model, pharmacokinetic modelling and regulatory aspects in radiopharmacy.

Involved in training and teaching Radiopharmacy establishing Master program in Radiopharmacy in English, a participant in the projects related to the high education and leading IAEA project for Developing, Testing and Installing E-learning System for the African Member States collaborating with University in Ferrara.

IAEA expert in Radiopharmacy and auditor in QUANUM activities.

Main investigator and participant in more than 15 projects and author of more than 200 publications and presentation of the national and international meetings, invited lecturers in the training courses and conferences.

Dr. Assia Konsoulova

Lectures and YOC sessions

Dr. Assia Konsoulova will present a scientific talk on Neoadjuvant Systemic Therapy in HER2 Negative Breast Cancer. During the last years, she is actively involved in many initiatives, focusing on the improvement of care for patients with breast cancer. During the presentation, she will underline the role of tumor biology and initial clinical staging before any subsequent treatment decisions. She will also discuss available evidence-based data for neoadjuvant approaches for HER2 negative breast cancer. She will focus on the gaps in the current Bulgarian clinical practice where neoadjuvant treatment is largely underused, especially in early triple-negative breast cancer. She will discuss the currently available chemotherapy, endocrine and target treatments in the neoadjuvant setting, as well as the most recent news in the field. Dr. Assia Konsoulova will also organize and participate in the Workshop for Young oncologists, focused on breast cancer. She will present a case of a Breast cancer patient and navigate a discussion between young oncologists who will be divided into two groups. The idea behind is the need for improvement of the decision-making process as well as to emphasize the role of discussion and multidisciplinary team approach. These are important milestones besides the solid educational and practical background in order to build a career in Oncology – a topic that she will discuss together with Dr. Mariela Vasileva in the talk on Building a Carrier of Young Oncologist - How it Works?

Dr. Assia Konsoulova graduated from the Medical University – Varna. She is board certified in Internal Medicine and Medical Oncology. She defended a PhD thesis in 2016. She is currently working as a senior medical oncologist at the Medical Oncology Department at Complex Oncological Center - Burgas.

Her professional career started at the University Hospital Sveta Marina, Varna in Bulgaria and she subsequently worked and specialized at International reference centers as Jules Bordet Institute, Brussels, Belgium, AKH–Vienna, Austria and Clinical Cancer Center Champalimaud, Lisbon Portugal. She has been awarded several grants, incl. ESMO, ESO, ECCO, CECOG and EU fellowships. She is also a recipient of the 2016 MORE-Darzalas award for significant input in the Bulgarian clinical oncology.

She is a member of ESMO, ASCO, ECCO, ESO, Flims Alumni Club, as well as a member of the ethics committee in the Society of the Young oncologists in Bulgaria. She is a national coordinator for Bulgaria for two large initiatives: European Initiative in Quality Management in Lung Cancer Care and ENTYAC (European network for teenagers and young adults with cancer).

Dr. Konsoulova is an author of more than 90 publications and scientific reports, most of them in peer-reviewed journals. She is an editor at the congresses of ERS and Breath journal. Dr. Konsoulova is also a member of the scientific committee of the National MORE conference for management of Breast (2018) and prostate cancer (2019).

Dr. Krasimir Shopov

Management of Breast Cancer – Surgical Experiences

Objective: To evaluate the effect of diagnostic and surgical experience in diagnosing breast cancer in its earlier stages. Possibility to choose more operational techniques and types of operations.

Design: Case study.

Setting: Four hospitals with surgical wards in general surgery

Subjects: 11260 women examined and diagnosed for 15 years and 563 operations performed.

Analysis of last 3 years and 9 months - 3240 women examined and diagnosed. 162 breast operations performed.

Interventions: Patients were summarized based on outpatient ultrasound examinations. Preventive examinations are also summarized in which 30 to 50 patients are examined in 2-3 days. Analysis of 162 breast surgeries in the last three years and 9 months according to operating protocols and hospital information program. Of these, 52 are breast cancer operations-32.1%, 98 are benign breast-cancer operations-60.5% and 12 are breast-inflammatory disease operations-7.41%

Main outcome measures: Outpatient examination protocols with ultrasound diagnosis of breasts are analyzed. Analysis of archived hospital information system for the last 3 years and 9 months. Measurements were taken at the first visit up to 7 days in the postoperative period or at three, six and 12 months after surgery.

Results: The clinical and diagnostic success rate in the detection of primary breast cancer is increasing

Conclusion: Experience in clinical examination with ultrasound diagnostics, combined with excellent training and good surgeon's operations techniques make it possible to detect early-stage breast cancer

Key messages

1. The surgeon's experience and training curve are essential to detect early-stage breast cancer
2. Combination of clinical examination with ultrasound diagnostics is extremely important for the initial staging of the disease
3. Surgical diagnostics in the initial stage and operative activity for initial breast cancer allows choosing the right surgery - organ-preserving surgery with immediate or delayed reconstruction

Krasimir Shopov M.D. Surgeon in "Alexandrovska" Hospital, Sofia, Clinic of Surgery "Prof. Alexander Stanishev", Second Department of Surgery

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Surgeon in "Alexandrovska" Hospital, Clinic of Surgery "Prof. Alexander Stanishev", Second Department of Surgery. Worked at: Hospitals "St. Vrach"- Sandanski, "Doverie" - Sofia, "Serdika"- Sofia.

Dr. Krasimir Shopov has been a specialist surgeon for 19 years. His interests are in the diagnosis and conservative and surgical treatment of breast diseases. Priority is given to the early diagnosis of breast cancer and organ storage operations with implant placement. Post-operative reconstructions for breast cancer.

Main activities and responsibilities: Surgery of the Breast

Activity:

1. Ultrasound diagnostics + Doppler, abdominal ultrasound, thyroid, veins and superficial skin structures.
2. Diagnostic Cor / TRU-CUT / breast biopsy.

3. Surgical treatment of breast diseases.

4. Reconstructive and reconstructive surgery with implants for breast diseases.

Main activities and responsibilities: Surgery of the Breast

Organizations providing education and training:

Specializations in general and abdominal surgery in Hamelburg and laparoscopic surgery (bloodless surgery) in Strasbourg and Hamburg;

- Specializations in endoscopy (fibrogastroduodenoscopy and colonoscopy);
- Breast ultrasound and Doppler ultrasound certificates.
- Participation in many national international breast cancer forums
- Healthcare Management specialization

Dr. Mariela Vasileva

Building a Carrier of Young Oncologist - How it Works

Mariela Vasileva-Slaveva, 1 Assia Konsoulova2,

1. EXTRO-Lab, Department of Therapeutic Radiology and Oncology, Medical University of Innsbruck, Austria
2. Complex Oncological Center Burgas, Burgas, Bulgaria

Oncology science is developing very fast in recent years. Only in 2018, there are 18 new oncological drugs approved by the FDA (in addition to the 6 new biosimilars) for different types of cancer. Despite this, the professionals in oncology have high emotional loading. This has led to up to 71% of burnout among young oncologists in Europe.

On the other hand, according to EUROCARE 5, cancer survival in Bulgaria is at least 10% lower in all cancer sites, compared to the European mean. This cannot be explained only with a patient's late-stage at presentation.

The need for improvement in cancer care in Bulgaria is urgent and only well-trained and highly motivated oncologists can have what it takes to make that improvement. Attending professional courses and congresses is an essential background for medical, clinical, surgical or radiation oncologists. We have made an overview of the most popular, foundational and easily reachable opportunities for young oncologists, provided across Europe.

Mariela Vasileva-Slaveva graduated in Medicine in 2011 at Medical University of Sofia, Bulgaria. She was a resident at the Department of General surgery Professor Alexandar Stanishev at the University Hospital Alexandrovska for the period of 2013 - 2018. Her professional and scientific interests are in the field of breast

and gastrointestinal cancers. Dr. Vasileva actively participates in educational courses of the European School of Oncology, European Society of Medical Oncology, Young oncologist club Bulgaria, etc.

As a PhD student she was awarded three grants "Young Investigator" for her projects at the Medical University of Sofia, with which she established the first tissue Breast Cancer Biobank at the University. In 2016 she defended a PhD degree on "Prognostic and predictive factors in breast cancer". Since 2017 she is part of the team, performing intraoperative radiotherapy in early breast cancer patients. In order to expand the indications for this procedure she participated in the 19th Methods in Clinical Cancer Research workshop, where she developed a phase I clinical trial protocol "Study of Intraoperative Radiotherapy for Patients with Early Breast Cancer and Sentinel Node Positive Axilla - SIRENA trial". In 2018 as a fellow of ESSO she specialized at The Netherlands Cancer Institute in Amsterdam under the supervision of Professor Dr. Emiel Rutgers.

Dr. Vasileva participates in many national and international congresses, presenting posters and oral presentations. She has more than 30 scientific full-text publications and abstracts. She is a member of ESO, ESMO, Flims Alumni Club, Member of the National Board for the elaboration of the National MORE 2017 Guidelines on Predictive Biomarkers in Clinical Oncology and EORTC Pathobiology group.

In 2019 Dr. Vasileva was awarded ESMO Translational research fellowship and she currently works as a translational researcher on Breast cancer metastasis and lipid metabolism at EXTRO lab, Department of Therapeutic Radiology and Oncology, Medical University of Innsbruck

Dr. Rossitza Krasteva

BRCA Mutations and PARP Inhibitors

BRCA1 and BRCA2 are tumor suppressor genes that produce proteins involved in DNA repair. Mutations in these genes can either be germline (hereditary) or somatic (acquired) and are the most common cause of hereditary breast cancer accounting for ~20% of all hereditary cases. The presence of either germline BRCA1 or BRCA2 mutations increases the lifetime risk of developing breast cancer from 12% to ~70% and is typically associated with the development of TNBC, a historically aggressive and difficult to treat subtype. PARP inhibitors have proven to be effective therapeutic options in patients with gBRCA mutations, offering good efficacy and QoL when compared to chemotherapy. Several PARP inhibitors are being developed at the moment, with Talazoparib and Olaparib already approved by the FDA and EMA for use in patients who have confirmed gBRCA mutations and have progressed or found unsuitable for anthracycline and/or Taxane containing therapy. Results from the randomized clinical trials of these agents show a significant improvement in progression-free survival for PARP inhibitors when compared to physician choice of chemotherapy, with a relatively milder safety profile and a more convenient route of administration.

Dr. Nedyalka Velikova

Exclusive and Adjuvant Radiotherapy in Locally Advanced and Primary Metastatic Breast Cancer

Breast cancer is the most common oncological disease worldwide. In many countries where the national screening programs are not widely implemented more than half of the patients are diagnosed in locally advanced and primary metastatic stages which is related to worse 5 – year survival rates. Improvements in systemic therapy and our fundamental understanding of tumor biology in the past decade have led to dramatic improvements but the role of locoregional therapy still remains controversial.

Locally advanced breast cancer encompasses a wide range of clinical scenarios including advanced primary tumors, advanced nodal disease, and inflammatory carcinomas. Women with the locally advanced disease require multimodal therapy including neoadjuvant chemotherapy (NCT) first, followed by surgery and/or radiotherapy. A key advantage of NCT is the opportunity to assess response early during treatment, to cause significant downstaging and probably to achieve a pathologic complete response (pCR) which is associated with long–term disease-free and overall survival outcomes. Current practice for patients who had a complete response to NCT is often to proceed with surgery, regardless of the apparent clinical outcome. Radiation therapy is usually recommended after breast-conserving surgery for patients who achieve pCR but postmastectomy radiotherapy for this group of patients remain controversial and careful consideration of clinical stage at presentation, other clinical characteristics and biomarker status is required. Given these high response rates in defined subgroups among exceptional responders, it is appropriate to question whether surgery is now a redundant procedure in their overall management, particularly when patients often routinely treated with adjuvant radiotherapy.

In the other case scenario, women who present with metastatic breast cancer are usually not offered local treatment of their primary tumor because this option is not thought to provide an improved outcome or survival benefit. It has also been suggested that surgical resection of the primary tumor may stimulate the growth of metastases although these arguments have never been sustained with randomized clinical trials. Several studies suggest that surgery of the primary tumor is associated with better survival and that exclusive locoregional radiotherapy may represent an effective alternative to surgery in this setting. In contrast, the use of postoperative radiotherapy in this setting is poorly documented. The role of locoregional radiotherapy in the management of locally advanced and primary metastatic breast cancer is crucial but more data is needed to determine in which group of patients it can replace surgery and when it is safe to omit it.

Dr. Nedyalka Velikova has graduated Medical University – Sofia in 2009. She did her training as a resident in Specialized Hospital for Active Treatment in Oncology – Sofa. She acquired specialty in Radiation Oncology in 2014 and continued to work as an assistant professor in the Radiotherapy Department in the same hospital until 2015. Now Dr. Velikova is part of the radiation oncology team working in Acibadem City Clinic Cancer Center – Sofia.

During her residency and work practice she attended several training courses at ESTRO, IAEA and Prime Oncology in Slovakia, Greece, Slovenia, Spain, Turkey, Hungary, Switzerland, Italy and Czech Republic. She has participated in numerous conferences as a speaker and in 2011 won the prize for best performance of the Eight National Congress of Oncology, Boyana Residence, Sofia. In 2014 she won an international scholarship supported by Avon Foundation for Women and became one of the 23 experts from all around the world working

in the field of breast cancer selected to study in the US. Dr. Velikova visited the ASCO Annual Meeting in Chicago and spent two months in New York Presbyterian Hospital / Columbia Medical Center, New York working with some of the world-renowned experts in the field of hypofractionated and intraoperative radiotherapy. Dr. Velikova is part of the authoring team who worked on the latest edition of the Medical Oncology textbook, edited by Prof. Timcheva.

Dr. Nedyalka Velikova is a member of Bulgarian Guild of Radiotherapy, Bulgarian Association of Radiology, Bulgarian Cancer Society, Bulgarian Association of Medical Oncology, the Young Oncologist Club, the European Society for Radiotherapy and Oncology (ESTRO) and the American Society of Clinical Oncology.

Dr. Velikova's main clinical interests are focused on Breast cancer, Gynecological malignancies, Lung cancer, CNS tumors, Interstitial and Intracavitary HDR Brachytherapy, SRS and SBRT.

Dr. Marchela Koleva

Over the last 21 years, the diagnosis and therapy of HER2 + breast cancer have undergone revolutionary changes, not only in terms of their complexity and multidisciplinary character but also in terms of individualizing and personalizing therapeutic approaches.

The introduction of Herceptin into clinical practice has led to a change in the natural course of the disease. The current standard of care for HER2-positive early breast cancer includes trastuzumab, pertuzumab and chemotherapy given either before or after surgery. Long-term follow-up in the NeoSphere trial found that improved pCR levels with the combination of pertuzumab and trastuzumab were associated with improvements in survival. At 5 years, 86% of the patients receiving the combinations were alive and disease-free compared to 81% of the patients receiving trastuzumab in combination with chemotherapy. In the Phase III HERA trial, 1 year of adjuvant trastuzumab was associated with significant improvements in both 10-year disease-free survival rates (DFS; 69% vs 63%; HR 0.76) and 12-year OS rates (79% vs 73%; HR 0.74) compared to observation. Despite the demonstrated efficacy of trastuzumab in early breast cancer, a significant proportion of patients will eventually progress. At the 10-year follow-up on the HERA trial, 28.8% of patients treated with trastuzumab experienced disease progression. The APHINITY study explores the possibility of improving the results of the addition of pertuzumab to adjuvant trastuzumab treatment and chemotherapy. At this point, patients with a high risk of relapse are of greatest benefit, with a 23% reduction in the risk of recurrence in the positive lymph node subgroup and a 24% reduction in the risk of relapse in the HR group respectively.

Due to the rapidly growing understanding of tumour biology, the accuracy of treatment for HER2 + eBC can be expected to increase further, leading to an increased chance of cure for patients with the disease.

Dr. Marchela Koleva graduated from the Medical University in Sofia in 1992. From 1995 till 2012, she has worked and specialized in Internal medicine and in Medical oncology at Queen Joanna University Multiprofile Hospital for Active Treatment in Sofia, Bulgaria. She has also worked in the Department of Medical Oncology at Serdica Hospital in the period June 2012 - April 2013. Dr. Koleva headed the Department of Medical Oncology at Sofia Med Hospital in Sofia 2013-2015. Currently she is the Head of the Department of Medical Oncology at Queen Joanna University Multiprofile Hospital for Active Treatment.

Dr. Marchela Koleva has different specializations in oncology in Austria, Belgium and the UK.

She is a member of a number of European professional organizations (ESMO) as well as of the Bulgarian Medical Society, Bulgarian Oncology Scientific Society, BUON, Young Oncologist Club Bulgaria, Bulgarian Society of Oncology, and the Society of Interventional Oncology. She has specific interests in the medical treatment of solid tumors, having served as an investigator in more than 25 multicenter clinical trials for treatment of solid tumors (as a principal investigator in 10 of them). She has issued 3 monographs and has participated in the preparation of 2 textbooks of medical oncology

Dr. Koleva has more than 23 publications in the field of oncology and she is a co-author of the Victoria program for the rehabilitation of patients with lymhostasis.

Dr. Marchela Koleva speaks three foreign languages - Russian, English, and Spanish.

Prof. Christoph C. Zielinski

Immunotherapy of Breast Cancer

Christoph Zielinski
Vienna Cancer Center, Vienna Hospital Association and Medical University Vienna, Austria, and Central European Cooperative Oncology Group (CECOG)

A series of escape mechanisms leads to a potential lack of efficacy of immunotherapy in breast cancer. These include a decrease in T cell activation as well as macrophage function (particularly in the context of antigen presentation) and, finally, immune cell trafficking. Thus, the understanding of possible interaction of tumour cells with immunocompetent cells in the microenvironment is of the essence. Whereas Her-2/neu overexpressing and endocrine dependent breast cancers have a lack of expression of neoantigens or neopeptides, it is mainly the triple-negative subgroup of breast cancer (TNBC) which is able to express an abundance of such structures making this very subgroup most likely to respond to immune intervention via immune checkpoint inhibitor treatment. Clinical studies reflect these assumptions, as the Keynote 028 study performed in estro-

gen receptor-positive (Her-2 negative metastatic breast cancer (MBC) produced rather sobering connected with the use of Pembrolizumab. In contrast, TNBC has been described to have both, the ability to be recognized as "foreign" as a consequence of neoantigen formation as well as the presence of infiltrating effector cells that would be able to be targeted in their function by immune checkpoint inhibitor (ICPI) treatment. TNBC was thus the target of ICPI in Keynote 012, Keynote 086 and NCT01375842 studies which showed promising results in particularly previously untreated TNBC regarding response rates (ORR), progression-free (PFS) and overall survival (OS; Keynote-086 Study, S. Adams et al., 2018). By bearing in mind that chemotherapy used together with ICPI might have an additive or even synergistic effect, the Impassion 130 study was launched which included patients with untreated metastatic TNBC who were randomized to the anti-PD-L1 antibody Atezolizumab plus nab-Paclitaxel versus Placebo plus nab-Paclitaxel. For the PD-L1 overexpressing subgroup of TNBC, the combination of Atezolizumab plus nab-Paclitaxel resulted in a significantly longer PFS (HR=0.62, 95%CI: 0.49-0.78) as well as OS (HR=0.62, 95%CI: 0.45-0.86; P. Schmid et al., 2018). The OS benefit persisted also in a 2-year survival follow up.

In summary, Atezolizumab plus nab-Paclitaxel should be regarded as the treatment of choice in patients with metastatic TNBC with overexpression of PD-L1.

Christoph C. Zielinski, MD

Prof Christoph C. Zielinski is currently Director of the Vienna Cancer Center of the Vienna Hospital Association and the Medical University Vienna, Austria, From 2001 to 2017 he was Director of the Clinical Division of Oncology, from 2004 to 2017 Director of the Department of Medicine I and from 2010 to 2017 Director of the Comprehensive Cancer Center of the Medical University Vienna, Austria.

Since 1999, Prof. Zielinski is president of the Central European Cooperative Oncology Group (www.cecog.org), which is conducting widely published clinical trials and educational activities in 23 countries of Central and Southeastern Europe involving env. 150 cancer institutions in the area.

Prof Zielinski completed his medical training at the University Hospital Vienna and began his career with a position as a research fellow at the Cancer Research Center at Tufts University, Boston, Massachusetts. 1992, he became a full professor of Clinical Immunology and Medical Oncology at the Medical Faculty of the University of Vienna, Austria.

Prof Zielinski's recent clinical research activities cover a wide range of cancer therapies with particular focus on clinical trials, breast and lung cancer research and treatment, experimental targeted treatment and immunotherapies. He has published >630 original papers and reviews in peer-reviewed journals and books with an h-index of 65 and citations exceeding 19.000.

In 2013, Professor Zielinski received an honorary doctorate degree from Titu Maiorescu University in Bucharest, Romania, and is an honorary member of the Polish Society for Oncology (2016). He is a member of the European Society for Medical Oncology and served on the Executive Board and as chair of the Fellowships and Awards Committee from 2014–2017. Since 2019, Prof. Zielinski is a member of the ESMO Council and since 2016, Editor in Chief of the internet-only open access peer-review journal "ESMO Open – Cancer Horizons" (esmoopen.bmj.com).

Prof Zielinski is also a member of the American Society of Clinical Oncology and the American Association for Cancer Research.

Dr. Rossitza Krasteva

Transformation of Ovarian Cancer Treatment. Is it possible?

Ovarian cancer is one of the most common gynecologic cancers that has the highest mortality rate. It is the sixth most common cancer in women in Europe. 70% of patients will relapse in the first 3 years following first-line treatment, where the disease is largely considered incurable. Approximately 38% of women are alive 5 years after diagnosis.

High-grade histology and platinum sensitivity pre-select patients with HRD. "Platinum-sensitive" phenotype in high-grade ovarian cancer potentially selects patients sensitive to Lynparza. Clinical data from the pivotal trails Study 19 and SOLO 2 support the administration of Lynparza maintenance treatment in platinum-sensitive relapsed ovarian cancer patients.

Lynparza as maintenance treatment provided a substantial benefit with regard to progression-free survival among women with newly diagnosed advanced ovarian cancer and a BRCA1/2 mutation, with a 70% lower risk of disease progression or death with olaparib than with placebo.

Lynparza in tablet formulation provides lower pill burden with proven efficacy and safety profile.

Dr. Katerina Genova

Establishing Biochemical Progression in Advanced Prostate Cancer

PSA is a marker of androgen receptor signaling. There is a correlation between the proliferation of the prostate cancer cell and levels of PSA. PSA levels that define treatment failure depend on primary radical treatment. PSA kinetics after treatment is a sensitive marker for disease activity and status.

In addition to PSA levels, it is very important to measure the PSA-DT, because there is a correlation with the increased risk of death and low PSA-DT. In addition, PSA-DT is key to determine the risk of metastases.

Bone health is essential to the QoL of patients. This is one of many reasons to treat patients with high-risk nmCRPC. Corticosteroids have many side effects that should be considered when prescribing them for long-term treatment, especially in patients with comorbidities such as hypertension, diabetes, dyslipidemia, osteoporosis, infections and other medical conditions negatively influenced by concomitant corticosteroids. PSA-prostate-specific antigen

PSA-DT - PSA doubling time

QoL – Quality of life

nmCRPC – non-metastatic castrate-resistant prostate cancer

Dr. Katerina Genova completed medical education in 1990 at Medical Academy – Sofia. From 1990 to 1992, she had worked as a General Practice doctor at Home for elderly people "Vazrazhdane"- Ruse. From 1992 to 2000 she worked as a doctor in the Chemotherapy ward of IRDODS-Ruse. From the year 2000, she is a senior ordinator in the Medical oncology ward in COC Ruse. From 2010, she is the Head of the Chemotherapy ward. She acquired major in „Internal diseases" in 2000 and in Oncology in 2004. Post diploma qualifications: Health management, Ultrasound diagnostic of abdominal organs, endocrine glands, mammary glands, novelties in medical oncology, oncology courses. Chief investigator – phase II, III and IV with indications for breast cancer, lung cancer, prostate cancer, colorectal carcinoma, stomach carcinoma, renal cell carcinoma, anesthesia for patients with malignancies, etc. since 2000 until now. Membership: Bulgarian Medical Association, Bulgarian Oncology Organization. Participation in ESMO.

Dr. Olga Kosseva

Dr Olga Kosseva is a graduate of Medical University Sofia and Prof. Zahari Krastev, with a doctorate in liver disease and opportunities for non-invasive assessment of liver changes; for five years a lecturer at the Department of Internal Medicine at Medical University Sofia; specialist in internal diseases since 2004 and gastroenterology since 2013; with special interest in liver diseases and ultrasound diagnostics.

1998 - graduated higher education in medicine at the Medical University-Sofia;

1999-2005 - Specialist in Internal Medicine at the Department of Internal Medicine of Medical University - Sofia

2003 - 2006 - PhD student at the Department of Internal Medicine with training base University Hospital "St. Ivan Rilski "

Gastroenterology Clinic

Dissertation topic: Liver fibrosis

2006-2011 - Coordinator at the Clinic of Gastroenterology, University Hospital "St. Ivan Rilski "

2008-2013 - Specialist in Gastroenterology

01.2011-03.2015 - Assistant Professor of Internal Medicine, Department of Internal Medicine, Sofia University- Sofia

Dr. Tatyana Pirdopska

Dr. Tatyana Pirdopska was born on 02.03.1974. She graduated in Medicine from the Medical Institute in Pleven in 1999. She has been a specialist in pathology since 2010. Dr. Pirdopska worked at the Medical University and the University Hospital Alexandrovska in Sofia from 2005 to 2017 as an assistant professor of pathology and a doctor. Since 2017 she has been working in the Department of Pathology at MBAL"Tsaritsa Yoanna-ISUL, Sofia, Bulgaria. Dr. Pirdopska is a member of the European and Bulgarian Society of Pathology and Yong Oncologist Club Bulgaria.

Dr. Mauro Papotti

Pathological and Molecular Features of Gastroenteropancreatic and Lung Neuroendocrine Tumors

Gastroenteropancreatic (GEP) and thoracic (lung and thymic) neuroendocrine (NE) neoplasms are all potentially malignant and include well-differentiated (WD) forms (NET G1/G2 and typical/atypical carcinoids) and high grade large and small cell NE carcinomas (LCNEC and SCC) based on specific cutoffs of mitotic counts and proliferative Ki67 index (WHO classifications of tumors: Gastrointestinal 2010, Lung/Thymus 2015, Endocrine pancreas 2017). In the GEP area, Grade 3 NE carcinomas (Ki67 >20%) are pathologically and clinically heterogeneous: a Ki67 cut-off of 55% tentatively distinguishes true high-grade carcinomas from proliferating well-differentiated NETs, named "NET-G3". Conversely, Ki67 is not requested for lung NET classification, but may be prognostic. Indeed, cases of lung carcinoids with brisk proliferation have been reported and probably represent the pulmonary counterpart of "GEP NET G3". They do not meet the criteria for a diagnosis of atypical carcinoid and rather belong to the LCNEC category, although they display morphological, clinical and genetic features more similar to carcinoids. Mixed tumors also exist, that combine NE (small/large cell) and non-NE (squamous or adeno) carcinoma features. Immunohistochemistry represents an essential tool to identify diagnostic, prognostic and theranostic markers. Diagnostic markers include pan-endocrine markers (chromogranin, synaptophysin, CD56, neurofilaments, hASH1) and specific hormones. In addition, organ-specific transcription factors (ISL1, PDX1, TTF1, CDX2) help to define primary origin, with some caveats (eg TTF1 stains both pulmonary & extrapulmonary NE carcinomas). High-grade NE carcinomas are common in the lung and rare in the GEP area (and in other non–NE organs, eg bladder and prostate among others). These tumors are morphologically and clinically relatively heterogeneous. In particular, while SCC is invariably associated to a high mitotic rate and high-grade cytological features including classical salt&pepper chromatin pattern, LCNEC belongs to a grey area that merges with atypical carcinoids on the one side (overlapping mitotic index values), and with SCC on the other (combined small and large cell NE carcinoma variants). High grade NE carcinomas are common in the lung and rare in the GEP area (and in other non–NE organs, eg bladder and prostate among others). These tumors are

morphologically and clinically relatively heterogeneous. In particular, while SCC is invariably associated to a high mitotic rate and high grade cytological features including classical salt&pepper chromatin pattern, LCNEC belongs to a grey area that merges with atypical carcinoids on the one side (overlapping mitotic index values), and with SCC on the other (combined small and large cell NE carcinoma variants). Rare cases combine features of well and poorly differentiated NE neoplasms in the same tumor, possibly supporting the viewthat NE neoplasms may rarely evolve from NET/carcinoids into high-grade NE carcinomas (at least in the lung). Genetically, several syndromes are associated to WD NETs/carcinoids, including MEN1&4, VHL, NF1, TSC. Other frequently mutated genes include DAXX/ATRX, PTEN, PIK3CA, YY1, CDKN1B, DCC, PRKAR1A in various primary sites. Conversely, high-grade LCNEC and SCC (mostly of the lung) were recently characterized by molecular analyses and found to share RB1, TP53, CREBBP, EP300, and MLL gene mutations and several amplifications. In addition, in LCNEC, different molecular subgroups were identified, labeled "type I LCNEC" (having bi-allelic TP53 and STK11/KEAP1 gene alterations, and a NE profile with ASCL1 high / DLL3 high / NOTCH low), and "type II LCNEC" (enriched for bi-allelic inactivation of TP53 and RB1 genes, reduced NE markers, ASCL1 low / DLL3 low / NOTCH high, upregulation of immune-related pathways) (George. Nat Commun 2018). Similarly, four clusters were found by integrated analyses of genomic, transcriptomic, and methylome data from NENs, including a small group of "LCNEC" having a carcinoid gene profile (called "supra-atypical" carcinoids) (Alcala. Nat Commun 2019). Regarding SCC, four molecular subtypes were identified as well, including the known pathways driven by ASCL1 and NeuroD1 gene alterations and two novel pathways regulated by YAP1 and POU2F3 gene mutations (Rudin. Nature 2019). All such molecular data are expected to expand the list of markers predictive of response to specifically tailored treatments, as currently known for some biomarkers in NET/carcinoids, such as somatostatin receptors/SSTR, mTor pathway molecules, PD-L1, as well as circulating NET gene transcripts.

In conclusion, the successful treatment of a NE neoplasm is, as expected, heavily linked to its correct classification. If small WD NET/carcinoids, as well as classical high-grade NE carcinomas, do not generally cause diagnostic problems, the intermediate "grey" area contains several tumors having mixed features that often fail to respond to therapy, probably because it is inappropriate for the histological type under investigation: novel immune markers and/or genetic/molecular profiles are expected to stratify more accurate diagnostic categories.

Present position: Full Professor of Pathology, University of Turin; Head, Division of Pathology, Città della Salute Hospital, Turin, Italy; Vice-Chair, Medical School, University of Turin

Resident program training in Oncology (University of Modena, 1983) and in Pathology (University of Torino, 1991).

DIAGNOSTIC ACTIVITY – Since 1982, diagnostic cytology exfoliative and fine needle aspiration biopsies and of pulmonary, thoracic and endocrine surgical pathology. Application of immunohistochemistry and molecular techniques to histological and cytological specimens for diagnostic, prognostic and predictive purposes.

Teaching activity - Pathology courses at the University of Turin First Medical School in Turin (years 1992-2003 and from 2015-date) and Second Medical School in Orbassano (from 1997-date). Pathology course at the Laboratory Technician School, University of Turin (1994-date). Cytopathology and surgical pathology courses at the Post-graduate Schools in Pathology, Oncology, Respiratory Medicine, Thoracic Surgery and Endocrinology (years 1987-date).

SCIENTIFIC ACTIVITY – Thoracic pathology (lung and mesothelium), Endocrine pathology (parathyroid, thyroid and adrenal glands as well as neuroendocrine tumors) and immuno-histochemical and molecular biology techniques applied to diagnostic pathology and aspiration biopsy cytology. Receptor analysis in endocrine tumors.

Over 400 papers in peer review journals e 420 abstracts.

Member of the International Academy of Pathology (IAP), European Society of Pathology (ESP), Società Italiana di Anatomia Patologica (SIAPEC), Endocrine Pathology Society, International Association for the Study of Lung Cancer (IASLC), European Neuroendocrine Tumor Society (ENETS).

Since 1982 obtained grants for research projects funded by the National Research Council (Rome), the Italian Ministry of University and Education, the Regione Piemonte (Turin), Fondazione Berlucchi, Compagnia di San Paolo (Turin) and the Associazione italiana per la ricerca sul cancro (AIRC, Milan).

Member of the Editorial Board of Pathologica, Virchows Archives, Archives of Pathology, J Endocrinological Investigations, American Journal of Clinical Pathology, Journal of Pathology, J Clinical Pathology.

1990-1999 Secretary and 2000- 2003 President of the "European School of Pathology (EScoP)", founded in Torino by the European Society of Pathology (ESP).

Prof. Irene Virgolini

Prof. Irene Virgolini is the Director of the University Clinic of Nuclear Medicine at the Medical University Innsbruck. Prof. Virgolini first studied medicine at the University of Vienna, where she also promoted in 1987. Habilitation also took place at the University of Vienna: 1992 in Experimental Nuclear Medicine and three years later in the field of internal medicine. In addition, she obtained the specialist physician's certificate for internal medicine and the additional specialist for nuclear medicine. She began her professional career as an assistant doctor at the former Secondary Medical University Clinic and at the University Clinic for Nuclear Medicine of the AKH in Vienna, where Virgolini also set up a working group with a focus on experimental oncological nuclear medicine. In 2000, Virgolini was appointed medical director of the Institute of Nuclear Medicine at Lainz Hospital, Vienna. During her work at the Vienna University Hospital, Virgolin's main interest in oncological radioisotope therapy ("Targeted Radionuclide Therapy"), in particular the development and establishment of new experimental nuclear medicine therapy forms (eg 90Y-DOTA lanreotide or analogue therapy in refractory tumor patients, 90Y-HMCF1 antibody therapy in ovarian cancer patients) in the clinic. Patents were also acquired for the developed radiopharmaceuticals in this experimental clinical area. Prof. Virgolini, in addition to her work as a senior physician in the "in vivo" area at the University Clinic for Nuclear Medicine in the Vienna University of Medicine (AKH), has introduced a number of special nuclear medical examinations in recent years and has established these in broad use at the Vienna University Hospital. Numerous invitations to guest lectures and a wide range of awards to the young doctor's group confirm the international importance of these new developments in nuclear medicine.

Prof. Virgolini has published more than 200 papers, her total impact factor is around 1000, the Hirsch Index 40 (based on Web of Science). She presented > 300 lectures on the topics of molecular therapy worldwide. 2018 Virgolini became the President of WARMTH.

Dr. Samuil Katov

Dr. Samuil Katov graduated the foreign language high school of Pleven (2011) and the Medical University in Sofia in 2018. As of February 2018, he works as a graduate in medical oncology of Medical Oncology at Queen Joanna University Multiprofile Hospital for Active Treatment in Sofia, Bulgaria.

During his studies at the university, Dr. Katov has had a number of internships in the juvenile surgery units (in Georgi Stranski University Hospital in Pleven), in the cardiology and pulmonology clinic, in an intensive care unit, and in the unit of hepato-biliary and pancreatic surgery in Alexandrovska University Hospital in Sofia.

Dr. Katov has also 2 years of experience working for IMS as an interviewer in marketing researches regarding new medical products.

Dr. Samuil Katov speaks two foreign languages - English, and German.

Prof. Sonya Sergieva

SPECT-CT Imaging in Thyroid Disorders

S.Sergieva, R.Pandev, T.Hadjieva, A.Fakirova

Department of Nuclear Medicine, Sofia Cancer Center, Department of Thyroid Surgery, UH"St.Jiovanna", Department of Radiotherapy, UH"St.Jiovanna", Department of Pathology, Military Medical Hospital, Sofia

Clinical application of radionuclide imaging techniques in various thyroid disorders is well known. Intensity of different tracers' uptake such as 131I, 99mTc-pertechnetate, 99mTc-Sestamibi/Tetrofosmin (MIBI/TF), 111In-Octreoscan/99mTc-Tektrotyd depends on the blood perfusion and bio distribution, the cell proliferation activity, the oxygen consumption, receptor status, etc. Acquired planar and SPECT protocols have an influence on diagnostic accuracy of thyroid scintigraphy. Recently hybrid SPECT-CT methods have become available. SPECT-CT imaging depicts precise location and the type of morphological changes that have occurred in the "hot" or "cold" scintigraphic spots.

Nodules are common thyroid pathology. Thyroid scintigraphy can determine the functionality of each nodule – hot, isofunctioning or non-functioning. Fusion SPECT-CT images show number, exact topography and size of each nodule; morphological patterns could be identified – solid, cystic or mixed structure, available micro calcification or capsulation; hyper plastic or autonomously functioning benign tissue; advanced malignant neoplasm.

Retrosternal thyroid accounts for only 7-10% of all mediastinal masses. Low dose CT as a part of SPECT-CT is applicable to detect mediastinal or retroclavicular goiter usually not visualized well by 99mTc planar scintigraphy and to limit their volume. This is valuable information to optimize surgical approach and planning resection.

Correct topography of 131I uptake used for the management of patients with differentiated thyroid cancer (DTC) is made difficult due to lack of anatomical landmarks in the whole body scan. One of the advantages of 131I SPECT-CT in the neck region is to distinguish equivocal foci as thyroid remnant, enlarged cervical lymph nodes or physiological uptake in the region of esophagus or salivary glands. 131I SPECT-CT should be used as a routine N/M staging procedure in DTC showing exact localization and morphology of loco regional and distant metastases.

SPECT-CT is a very useful modality in non-iodine avid disease due to lack or subsequent loss of 131I uptake possibility and increased Tg for correct prescription to give or withhold 131I treatment in DTC patients, to select cases for external beam radiotherapy or target treatment with TKI.

Medullary thyroid cancer (MTC) is neuroendocrine tumor that accounts for 5-10% of all thyroid malignancies. MTC cells expressed somatostatin receptors. SPECT-CT is used in order to optimize somatostatin-receptor scintigraphic protocols for early N/M staging which is extremely important for the management of MTC.

In conclusion the introduction of multimodal SPECT-CT imaging in thyroid pathology increases the diagnostic value of nuclear medical methods, which has important clinical impact for determining and planning individual therapeutic approach in patients with various thyroid disorders.

Prof. Sonya Borisova Sergieva is a nuclear medicine specialist who works in Sofia City Oncology Dispensary and as of 2013 is an Associate Professor at the Specialized Hospital for Treating Oncology Diseases in Sofia.

Dr. Sergieva graduated the Medical Academy in Sofia in 1990 and specialized Nuclear Medicine in the National Oncology Center and Alexandrovska Hospital in Sofia in the period 1991-1994. After getting her nuclear medicine diploma in 1994, she moved on specializing in oncology and finished her second specialization in 1998.

Dr. Sonya Sergieva started her career in the National Oncology Centre in Sofia where she worked from 1991 till 2002. Later on, she moved to the Department of Nuclear Medicine in Sofia City Oncology Dispensary, which she headed for 10 years from 2003 till 2012.

Prof. Sergieva has a lot of experience in the field of clinical trials being a coinvestigator, and has participated in 8 scientific projects, half of them international. She is currently a member of Bulgarian Association of Nuclear Medicine, Bulgarian Scientific Oncology Society, the European Association of Nuclear Medicine (EANM) and BUON.

Dr. Sergieva has 84 publications in both Bulgarian and international scientific magazines and is an author of more than 130 reports and resumes delivered at local and international scientific events. Her dissertation topic is about the diagnosis and differential diagnosis of malignant melanoma using radio-marked monoclonal antibodies.

Prof. Sonya Sergieva speaks Russian and English as foreign languages.

Dr. Rossitza Krasteva

New Opportunities for Metastatic Colorectal Cancer Therapy

Lonsurf is a novel therapy that provides a real option for active treatment of pretreated patients with mCRC and mGC. The benefits of the product were significantly proved by two large multicenter randomized clinical trials and were confirmed by real patient cases from the daily clinical practice.

- mCRC indication:

Lonsurf, as a third-line treatment after two disease progressions, by improving survival and preserving performance status and QOL, helps fit and active mCRC patients live longer and remain eligible for subsequent therapies; patients benefit most from optimal treatment duration when they have low tumor burden and less aggressive disease.

mCRC patients who benefit the most from Lonsurf have been identified and, for the very first time, Lonsurf patients can reach a mOS of 9.3 months and 16.4 months.

For the best efficacy outcomes, Lonsurf should be used preferably for GPC/BPC patients with low tumor burden and less aggressive disease: in third-line, PS 0-1, with 1 or 2 metastatic sites, and time since diagnosis of the first metastases O18 months (BPC patients are GPC patients without liver metastases at diagnosis).

96% of Lonsurf PS 0 patients with GPC at and third-line are still at PS 0-1 at treatment discontinuation

- mGC indication:

LONSURF - the only treatment approved and recommended as a third-line mGC therapy, based on the first positive global phase

3 study in this setting with high unmet needs, by providing meaningful survival benefits and preserving performance status and QOL, helps fit and active mGC patients live longer.

Lonsurf significantly prolongs OS with a 2.1-month OS benefit (mOS of 5.7 months vs 3.6 months with placebo), reducing the risk of death by 31%(HR, 0.6 Lonsurf significantly prolongs progression-free survival, reducing the risk of progression by 43% (HR, 0.57; Pl0.0001); PFS at 2 months is 49.7% vs 25.3% and PFS at 4 months is 26.8% vs 7.7%.9; Pl0.0001).

Lonsurf preserves quality of life.

Dr. Rossitza Krasteva, the Chairman of Young Oncologist Club, is one of the leading specialists in medical oncology in Bulgaria. She has graduated the Medical University in Sofia in September 1994 and did two specializations after that - Internal Medicine (2001) and Oncology (2005). She also won a number of fellowships for further training in Bulgaria and abroad, as well as attended specialized courses in university hospitals in Italy, Greece, Germany and Switzerland.

All of Dr. Krasteva's professional and scientific interests are in the field of medical oncology. Her career as a medical oncologist includes working at the Clinic of Medical Oncology at the University Hospital Queen Joanna – ISUL, the International Oncology Consulting Center and Serdika Hospital in Sofia. She is currently the Head of Medical Oncology Clinic, Central Bulgarian Comprehensive Cancer Services, Uni Hospital, Panagyurishte. She has been a Principal Investigator and a sub-investigator in several phase II and III clinical trials for adjuvant treatment and treatment of metastatic disease in solid tumors. Dr. Krasteva is a member of Bulgarian Cancer Society, Bulgarian Association of Medical Oncology, The Balkan Union of Oncology, ESMO and ASCO. She was elected the first Chairman of Young Oncologist Club Bulgaria. Dr. Krasteva speaks 2 foreign languages - English and Russian.

Dr. Sean X. Yan

Dr. Yan is currently a senior consultant with the Department of Nuclear Medicine and Molecular Imaging, Singapore General Hospital and a visiting consultant with the National Cancer Center Singapore.

Dr. Yan obtained his medical degree from Chongqing Medical University, China. He completed his residencies in internal medicine (Mount Sinai Medical School) and nuclear medicine (Vanderbilt University) as well as a clinical fellowship (Emory University) all in the USA.

His postdoctoral oncology research fellowship was with Vanderbilt-Ingram Comprehensive Cancer Centre in Nashville, USA. Before joining Singapore General Hospital, Dr. Yan was an attending radiologist in Trident Medical Imaging, Atlanta, Georgia, USA.

Dr. Yan has strong interest in molecular imaging and targeted radionuclide therapies such as PRRT for neuroendocrine tumours, PRLT for prostate cancer and SIRT for liver tumours.

Notes

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Sponsors of this event:

www.youngoncologistbg.com