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Abstract Book

The 25th Annual Congress of Romanian Society for Radiotherapy and Medical Oncology (RSRMO)

Sibiu, 15-17 October, 2015

ABSTRACT BOOK

The 25th Annual Congress of Romanian Society for Radiotherapy and Medical Oncology (RSRMO)

Sibiu, 15-17 October, 2015

Romanian Society for Radiotherapy and Medical Oncology working to improve quality of cancer care

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The Romanian Society for Radiotherapy and Medical Oncology (RSRMO) (initially named the Romanian Society for Radiation Oncology) was established in the Institute of Oncology "Ion Chiricuta" Cluj-Napoca on October 8, 1991 at the initiative of Prof. Dr. Nicolae Ghilezan, with 28 radiotherapists as founding members. It is a dedicated professional society for radiotherapy but open to individuals in all oncology specialties (surgeons, biologists, medical oncologists, pathologists, physicists, radiotherapy technologist, etc). In 2010 the General Assembly of the society decided to change the name to the Romanian Society for Radiotherapy and Medical Oncology (RSRMO) due to the increasing number of medical oncologist members and increased financial support from this branch of the profession.

The Romanian Society for Radiotherapy and Medical Oncology (RSRMO) (http://www.srrom.ro) is a nonprofit, nonpolitical professional organization having its domicile in Cluj-Napoca (Figure 2), with 246 current active members.

Main Objectives

The purpose of RSRMO is to bring together specialists in the field of medical oncology and radiotherapy in order to contribute to the increase in quality of oncological care. RSRMO aims to establish a high professional standard through supporting specialist education at all levels (university, post-graduate, doctoral) for all its members (physicians, physicists, biologists, etc.). An important objective of the society is to protect the interest of its members and of oncology and radiotherapy in general in dealings with the organizations overlooking their activities – the Ministry of Health, the Government, the Ministry of Education, county health departments. The society promotes equal and unrestricted access for all patients to optimal cancer treatment.

RSRMO aims to promote the collaboration of specialists in the field of oncology and radiotherapy, as well as the collaboration with specialists in other oncology-related fields. It promotes collaboration with international organizations of medical oncology and radiotherapy, cancer foundations, universities, patient groups and the representatives of the pharmaceutical and medical technology industries.

The society proposes to inform and educate patients, the civil society and the general public about the issues related to the prevention, diagnosis and treatment of all malignant disorders.

The Executive Board of the Society is elected by the General Assembly for a term of three years and it consists of five members: the Secretary, three Presidents (the Executive President and two Vice Presidents) and the treasurer. Each President heads the Executive Board for one year. The Executive Board conducts its activities with the help of a number of committees appointed by it: the committee for organizing the National Congress, the scientific committee, the education committee, the ethics committee, the elections committee, etc.

The General Assembly consists of all the members of the Society and meets at least once a year at the National Congress. Every year RSRMO organizes a congress for specialists in radiotherapy and medical oncology with the participation of its members as well as other specialists involved in RSRMO activities and specialists of oncology-related fields (surgeons, physicists, radiobiologists, pathologists, etc).

Significant activities

RSRMO has a prolific activity both nationally and internationally, promoting collaboration and mutual recognition of professional organizations in the field.

RSRMO organizes Annual Congresses focusing on contemporary topics, building relationships amongst the different specialists involved in cancer care and research. For example in 2010 the congress was entitled "Gynaecological Cancers: a Continuous Challenge" and was officially endorsed by the European Society of Gynaecological Oncology (ESGO). In 2011 the congress focused on ETHICS, EFFICIENCY and EFFECTIVENESS in ONCOLOGY, in 2013 on MODERN APPROACH IN ONCOLOGY: FROM SCREENING TO STATE-OF-THE ART THERAPY – both with de official endorsement of ESMO and recommended by ESTRO. (http://www.srrom.ro)

The opening session of each year's congress is called 'The Resident's Afternoon' and it is aimed at residents. This is the forum where residents of radiotherapy, medical oncology and other specialties present the results of their research, with prizes going to the three most significant presentations.

The Society's publication is called *"Journal of Radiotherapy and Medical Oncology"*. The first issue was published in 1995 in Romanian and since 2008 it is being published in English, with four issues annually. Our Journal publishes papers which are of a high standard and which contribute to the advancement of knowledge in the field of radiotherapy and medical oncology. The journal also publishes review articles, case reports and brief communications (including book reviews) on those specific topics. The website address of the Journal is **http://www.jradonco.ro.**

RSRMO is involved in education at national level: it develops and updates the national curriculum for radiotherapy and medical oncology in keeping with the European curriculum developed by ESTRO and ESMO. Similarly, RSRMO contributes to the development of medical education by courses for medical specialists organised by the University of Medicine and Pharmacy Cluj-Napoca or by the two National Romanian Cancer Institutes (of Bucharest and of Cluj-Napoca).

RSRMO offers fellowships and grants (travel, registration fees for international courses and congresses) for residents in radiotherapy or medical oncology, as well as of radiotherapy physicists.

RSRMO is involved in clinical practice through regular evaluations of the radiotherapy practice in Romania and analysis of clinical results in all cancer centers (e.g. the evaluation of therapeutic methodology and results of cervical cancer and breast cancer treatment at 5 year intervals, etc.). The evaluation reports have been published in the Journal of the Society.

RSRMO has an important role in supporting scientific research, reflected in publications in international journals. There is a marked interest in lung cancer resulting in the high number of recent publications on this topic, such as Goss GD, Arnold A, Shepherd FA, Dediu M, Ciuleanu TE, et al. *Randomized, Double-Blind Trial of Carboplatin and Paclitaxel with either Daily Oral Cediranib or Placebo in Advanced Non-Small-Cell Lung Cancer: NCIC Clinical Trials Group BR24 Study. Journal of Clinical Oncology,* 28, 49-55, (2010); Tudor Ciuleanu et al. *Efficacy and safety of erlotinib versus chemotherapy in second-line treatment of patients with advanced, non-small-cell lung cancer with poor prognosis (TITAN): a randomised multi-centre, open-label, phase 3 study. Lancet Oncol.* 13, 300 (2012); Brodowicz, T Ciuleanu, et al. *Third CECOG consensus on the systemic treatment of non-small-cell lung cancer. Ann. Oncol.* 23, 1223 (2012).

The multidisciplinary treatment of advanced cervical cancer has been the focus of a number of randomised, single-institution trials which initially evaluated the effectiveness of exclusive radiotherapy vs. chemoradiation and later the effectiveness of various schemes of concurrent chemoradiation treatments: Nagy Viorica, et al. Quality of life and treatment related toxicity in 335 patients with locally advanced cervical carcinoma treated by two chemoradiation regimens. Journal of BUON, 12, 3, (2007); Viorica Nagy, et al: Radiotherapy versus Concurrent 5-day Cisplatin and Radiotherapy in Locally Advanced Cervical Carcinoma: Long Term Results of a Phase III Randomized Trial. Strahlenther Onkol, 3, 185, (2009); Nagy, Viorica Magdalena, et al. Randomized Phase 3 Trial Comparing 2 Cisplatin Dose Schedules in 326 Patients With Locally Advanced Squamous Cell Cervical Carcinoma: Long-Term Follow-Up. International Journal of Gynaecological Cancer, 22, 9, (2012).

RSRMO has a close relationship with ESTRO. At the annual National Societies Meeting organized by ESTRO, RSRMO has an active presence through the participation of one or two members of its Executive Board. The current Romanian national representative for ESMO is a member of RSRMO and is very active within ESMO. Our society was present and had a booth set up at the ESTRO International Oncology Forum 8-12 May 2011, London, UK (Figure 3), as well as at the ESMO Congress 28 Sept.–2 Oct. 2012, Vienna, Austria, displaying significant moments in the Society's activity, the Society's Journal, etc. and generated genuine interest amongst the delegates of these events.

Of the various other national societies with whom we have been in collaboration we must mention a number who have supported our society through continuous medical education programs that many of our members benefited from, as well as through conferences and courses given at various RSRMO events. First of all we would like to mention the long-lasting collaboration (of over 20 years) and support offered by the French Society for Radiotherapy and Oncology (SFRO) and implicitly the major cancer centers from France (Institut Gustave Roussy, Villejuif, Paris; Hospital Universitaire Henri

Mondor, Paris), by the Italian Association of Oncological Radiotherapy (AIRO) and by the European Institute of Oncology, Milan, Italy.

We also need to mention the course organized by our society in collaboration with the University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca in 2006 which also had international lecturers: renowned radiotherapists and medical physicists from William Beaumont Hospital, Royal Oak, USA and the 2009 Brachytherapy course organized in collaboration with a team from the Radiotherapy Department of the Vienna General Hospital (AKH). Another course which RSRMO organized with international collaboration was the 2011 ASCO International Clinical Trials Workshop.

However, there are still a number of unsolved problems in radiotherapy in Romania, primarily due to the great deficiency in radiotherapy equipment which makes it difficult for patients to access radiotherapy treatment. Other problems include the deficiency in reimbursement of cancer treatment, the inconclusive dialogue with central authorities, etc. RSRMO has made repeated appeals to the Ministry of Health pointing out the problems and proposing solutions for the improvement of the situation of radiotherapy in Romania.

Recent achievements

This year RSRMO has had two important achievements. The society has established a Resident Group for radiotherapy and medical oncology residents which has 83 members. This group aims to establish a high professional standard for residents, to protect the interest of residents, to collaborate with residents in other fields, to collaborate and develop common projects with international societies of residents of radiotherapy and medical oncology, with cancer organizations and foundations, universities, patient groups, etc.

Also in the current year RSRMO, as founding member, had a crucial role in the establishment of the FEDERATION OF ROMANIAN CANCER SOCIETIES (FRCS) whose purpose is to promote, coordinate and develop collaboration amongst the various organizations in different fields of oncology in Romania.

Even though RSRMO is a small national society, in its existence it has had a very fruitful activity, seeking to fulfill the main objectives of its statute. We propose to maintain the high standard we have established and to increase the society's activity both nationally and internationally.

SCIENTIFIC PROGRAMME

THURSDAY, 15 OCTOBER 2015

09:00 – 11:05 **ATLAS ROOM** **09:00 – 09:05** **09:05 – 09:35** **09:35 – 10:05** **10:05 – 10:35** **10:35 – 11:05**	**Precongress course:** **„2015 news in molecular targeted therapy"** **Coordinator: Prof. Dr. T.E. Ciuleanu** **University of Medicine and Pharmacy „Iuliu Hatieganu" Cluj-Napoca** ***Introduction*** **T.E. Ciuleanu** ***Immune oncology versus targeted therapies in solid tumors – is there a winner?*** **R. Curca** ***De ente et essentia. Understanding cancer genomics in the selection of the best targeted therapy.*** ***Resist the resistance. How to use a TKi when TKi is not working*** **A. Ungureanu** ***Non-Small Cell Lung Cancer*** **T.E. Ciuleanu** ***Precision medicine insights in breast cancer*** **A. Eniu**
09:00 – 11:05 **HERA ROOM**	**Educational session on physics:** ***"Physics Principles for IG-IRMT"*** **Dr. N. Corradini, Clinica Luganese, Lugano, Switzerland**
11:05 – 11:30 **FOYER**	**Coffee break – all sessions**
11:30 – 13:00 **ATLAS ROOM** **11:30 – 12:00** **12:00 – 12:30** **12:30 – 13:00**	**Precongress course:** **„2015 news in molecular targeted therapy"** Medley in precision medicine: ***Update in brain tumors*** **Dana Cernea** ***Digestive tumors*** **Adina Croitoru** ***Gynecological tumors*** **Viorica Nagy**
11:30 – 14:00 **HERA ROOM**	**Educational session on contouring:** ***"Volume Delineation for Thoracic Tumors"*** **Prof. M. Ozsahin, CHUV, Lausanne, Switzerland** **Dr. S. Adeberg, University Hospital of Heidelberg, Germany**
13:00 – 13:45 **RESTAURANT**	**Lunch – Precongress course**
14:00 – 14:45 **RESTAURANT**	**Lunch – Educational session on contouring**

13:45 – 15:30 **ATLAS ROOM** **13:45 – 14:15** **14:15 – 14:45** **14:45 – 15:15** **15:15 – 15:30**	**Precongress course:** **„2015 news in molecular targeted therapy"** Medley in precision medicine: ***Prostate cancer*** **G. Kacso** ***Renal cancer*** **Dana Stanculeanu** ***Cutaneous tumors*** **D. Jinga** ***Closing remarks and take home messages*** **T.E. Ciuleanu**
14:45 – 15:45 **BETA ROOM** **14:45 – 15:00** **15:00 – 15:15** **15:15 – 15:30** **15:30 – 15:45**	**Session: Medical physicists** **Moderators: Adina Madalina Badiu, A. Chis** ***Characteristics of brachytherapy sources used for the treatment of prostate cancer*** **Edina Dordai** ***Treatment planning using Volumetric Modulated Arc Therapy for esophageal tumors*** **R. Popa** ***"Helical" and "TomoDirect" techniques for breast cancer treatment with TomoHD System*** **Mihaela Papiu, T. Bucur** ***Left sided breast cancer radiation therapy. Technical issues of treatment planning and dose optimization*** **Edina Morvay Szabo**
15:30 – 16:00 **FOYER**	**Coffee break – Precongress course**
15:45 – 16:00 **FOYER**	**Coffe break – Session: Medical physicists**
16:00 – 19:40 **ATLASS ROOM** **16:00 – 18:00** **16:00 – 16:10** **16:10 – 16:20** **16:20 – 16:30** **16:30 – 16:40** **16:40 – 16:50** **16:50 – 17:00** **17:00 – 17:10** **17:10 – 17:20**	**SRROM Congress Session** **Resident afternoon** **Moderators: Viorica Nagy, Rodica Anghel** ***Evaluation of dosimetry parameters and their clinical implication in 3D CRT – IMRT – VMAT-RAPIDARC® radiotherapy techniques for esophageal cancer*** **G.C. Mihaila** ***Volumetric modulated Arc therapy in the treatment of rectal adenocarcinoma: initial experience*** **Elena Manea** ***Solid pseudopapillary tumor of the pancreas: clinicopathologic features and management of 13 cases*** **O.V.Bochis** ***Treatment with folfirinox in locally advanced and metastatic pancreatic cancer*** **R.Vidra** ***Chemoresponsivness to neoadjuvant chemotherapy – novel prognostic factor for patients with locally advanced cervcal carcinoma*** **Domnica Carpov** ***Efficacy and toxicity of treatment with cetuximab in metastatic colorectal cancer: the experience of the Oncology Institute Cluj-Napoca*** **Adina Nemes** ***The role of sequentiality in the multidisciplinary treatment of cervical cancer*** **Claudia-Diana Sabau** ***Three-dimensional conformal radiotherapy in cervical cancer, stage IIB-IIIB: experience of the Oncology Institute "Prof.Dr. Ion Chiricuta" Cluj-Napoca*** **Anamaria Sipos**

17:20 – 17:30	***The role of the induction chemotherapy followed by radiochemotherapy in advanced rectal cancer-assessed by MRI***
	Andrea Craciunescu
17:30 – 17:40	***Clinical aspects and results of whole brain radiotherapy for multiple brain metastases***
	Patricia Suteu
17:40 – 17:50	***Short-course radiotherapy outcomes in neoadjuvant treatment of rectal carcinomas***
	C. Hopirtean
17:50 – 18:00	***Efficiency assessment of paclitaxel and carboplatin regimen in patients with ovarian cancer***
	Amalia Moldovan
18:00 – 19:40	**Partners Symposiums**
18:00 – 18:30	**Symposium JANSSEN**
	Rolul antraciclinelor în managementul cancerului mamar metastatic
	R. Tanasescu
18:30 – 18:50	**Symposium SANOFI**
	Inhibitori de factori angiogenici multipli cu ameliorarea supravietuirii generale vs. FOLFIRI + placebo
	Cristina Cebotaru
18:50 – 19:20	**Symposium BRISTOL MYERS SQUIBB**
	Perspectives in melanoma: Immuno-Oncology the New Treatment Paradigm
	D. Schadendorf
19:20 – 19:40	**Symposium ASTRAZENECA**
	De la Tamoxifen la Fulvestrant: ce am invatat?
	R. Tanasescu, R. Curca
16:00 – 19:40	**Session: Medical physicists**
BETA ROOM	**Moderators: Mihaela Papiu, R. Popa**
16:00 – 16:15	***Daily image guidance with cone-beam computed tomography for head and neck cancer IMRT***
	Adina Madalina Badiu
16:15 – 16:30	***Image guidance with CBCT in lung cancer radiotherapy***
	Claudia Irina Sarca
16:30 – 16:45	***Dosimetric check-up of dose distribution considering the influence of positioning errors in modern radiotherapy***
	A. Chis
16:45 – 17:00	***Treatment planning using Volumetric Modulated Arc Therapy for lung tumours***
	M. Suditu
	Innovative Technologies: Indications & Clinical Benefits
17:00 – 17:30	**M. Ozsahin**
	Clinical Outcomes and Challenges of Lung SBRT
17:30 – 18:00	**X. Mirabel**
18:00 – 18:20	**Symposium MEDIST/ACCURAY**
	CyberKnife and TomoTherapy Systems in a Busy Department: Impact on Organization
	X. Mirabel
	Medical physicists Meeting
18:20 – 19:40	**A.Chis**
20:00 – 22:00	**WELCOME RECEPTION**
RESTAURANT	**Ramada Hotel Sibiu**

FRIDAY, 16 OCTOBER 2015

09:00 – 10:00 **ATLASS ROOM**	**Opening Ceremony** **A. Moga – RSROM President**
10:00 – 11:50 **ATLASS ROOM**	**Epidemiology, Screening & Diagnosis Session** **Moderators: Ofelia Suteu, D. Vancea**
10:00 – 10:15	***Time trends of incidence and mortality by lung cancer*** **Ofelia Suteu**
10:15 – 10:30	***Initiatives for improving diagnosis of lung cancer -what is different for Romania ?*** **Ruxandra Rajnoveanu**
10:30 – 10:45	***Time-scale enhancement of chest radiographs improving cancer diagnosis and treatment*** **Iolanda Dumitrescu**
10:45 – 11:00	***Why we need TNM Staging in Lung Cancer?*** **D. Vancea**
11:00 – 11:15	***Software-assisted quality improvement in thoracic X-RAY imaging aiding cancer follow-up*** **Iolanda Dumitrescu**
11:15 – 11:30	***Early detection of lung cancer and diagnosis of genetic predisposition*** **Z. Fekete**
11:30 – 11:50	**Symposium ASTRAZENECA** ***Schimbarea paradigmei de tratament în cancerul bronhopulmonar: de la abordarea holistică la cea personalizată*** **T. E. Ciuleanu**
11:50 – 12:10 **FOYER**	**Coffee break/** **Posters Session A (1-4) – Moderators: T.E. Ciuleanu, A. Moga**
12:10 – 14:15 **ATLASS ROOM**	**Medical Oncology Session** **Moderators: T.E. Ciuleanu, M. Dediu**
12:10 – 12:40	***New molecules under development in lung cancer at Gustave Roussy*** **J.P. Armand**
12:40 – 13:05	***NSCLC management 2015: an update*** **D. Paul**
13:05 – 13:20	***Current status and further perspectives in squamous cell NSCLC*** **M. Dediu**
13:20 – 13:35	***Malignant mesothelioma – current and future therapy*** **Dana Clement**
13:35 – 14:15	**Symposium ROCHE** ***Statusul EGFR- factor determinant în alegerea tratamentului pacienților cu cancer pulmonar*** **R. Curca** ***Importanța tratamentului cu Avastin la pacientele cu cancer de sân -forma agresivă*** **Dana Grecea**
12:10 – 14:15 **HERA ROOM**	**Radiotherapy Session** **Moderators: Rodica Anghel, Petronela Rusu**
12:10 – 12:25	***The role of radiotherapy (RT) in improving treatment outcome in small cell lung cancer (SCLC)*** **Petronela Rusu**
12:25 – 12:40	***The role of radiotherapy in treatment outcome in lung cancer – the experience of the Radiotherapy Department of Sibiu*** **A. Moga**

12:40 – 12:55	***The future looks bright – multidisciplinary approach for lung resections in T4 disease with great vessel involvement*** **V.S. Costache**
12:55 – 13:10	***State of art in the intensity modulated radiotherapy of the lung cancer*** **I.C. Chiricuta**
13:10 – 13:25	***Is concomitant chemoradiation an undisputable gold standard for locoregionally advanced disease?*** **Renata Zahu**
13:25 – 13:40	***Principles of medical treatment for neuroendocrine tumors*** **Rodica Anghel**
13:40 – 13:55	***Brachytherapy for lung cancer: utopia or reality in Romania?*** **G. Kacso**
13:55 – 14:15	**Symposium MERCK** ***Head and Neck – Multidisciplinary approach and Treatment optimization*** **N. Magne**
14:15 – 15:00 **RESTAURANT**	**Lunch/** **Posters Session B (5-11) – Moderators: G.Kacso, C. Cainap**
15:00 – 17:35 **ATLASS ROOM**	**Medical Oncology Session** **Moderators: L. Miron, C. Cainap**
15:00 – 15:15	***Smallcell lung cancer-promises and pitfalls in 2015*** **L. Miron**
15:15 – 15:30	***Malignant pleural mesothelioma- overview of the literature and 15 years experience of "Prof Dr Ion Chiricuta" Institute of Oncology Cluj-Napoca*** **Alexandra Gherman**
15:30 – 15:45	***Neuroendocrin tumors of the thorax*** **C. Cainap**
15:45 – 16:00	***Drug interactions in the therapy of lung cancer*** **Laura Veronica Budau**
16:00 – 16:15	***Nonhodgkin lymphoma diffuse large B CELL CD20 + . Difficulties in therapeutic management*** **Alina Catana**
16:15 – 16:35	**Symposium TORUS PHARMA** ***SIRFLOX – integration of SIR-Spheres Y-90 resin microspheres into the earlier management of colorectal liver metastases*** **R. Sharma**
16:35 – 16:55	**Symposium PFIZER** ***NSCLC – oncogene driven subtypes*** **T.E. Ciuleanu, M. Dediu**
16:55 – 17:15	**Symposium AMGEN** ***Panitumumab + FOLFOX sau FOLFIRI in prima linie de tratament al cancerului colorectal metastazat RAS WT*** **Adina Croitoru**
17:15 – 17:35	**Symposium BOEHRINGER – INGELHEIM** ***Afatinib efficacy data in NSCLC*** **T.E. Ciuleanu**

15:00 – 17.35 **HERA ROOM**	**Radiotherapy Session** **Moderators: M. Savu, A. Moga**
15:00 – 15:15	***Different modalities of irradiation in superior vena cava compression syndrome – historical perspective*** **M. Savu**
15:15 – 15:30	***SBRT lung with TOMO in Heidelberg*** **V. Tarcea**
15:30 – 15:45	***Hypofractionation with TOMO in Heidelberg*** **S. Adeberg**
15:45 – 16:00	***Pulmonary adverse events in combined treatment of locally-advanced non-small cell lung cancer (la NSCLC)*** **Petronela Rusu**
16:00 – 16:15	***Incidence, severity and management of skin toxicity associated with EFGR inhibitors therapy in head and neck and lung cancer patients*** **Rodica Anghel**
16:15 – 16:30	***State of art in the intensity modulated radiotherapy of the esophageal cancer*** **I.C. Chiricuta**
16:30 – 16:45	***Esophageal cancer. A retrospective study from the Institute of Oncology Prof. Dr. I. Chiricuta.*** **Z. Fekete**
16:45 – 17:00	***Strategies of nutritional support for the esophageal cancer patient*** **Ioana Irina Mateies**
17:00 – 17:15	***Testing new biohibrid structures for therapeutic potential in oncology and regenerative medicine*** **Ioana-Carmen Brie**
17:15 – 17:35	**Symposium ASTELLAS** ***Treatment decision in a new therapeutic landscape – mCRPC*** **G. Kacso**
17:35 – 18:00 **FOYER**	**Coffee break/** **Posters Session C (12-16) – Moderators: Petronela Rusu, S. Pop**
18:00 – 18:55 **ATLAS ROOM**	**Partners Symposiums**
18:00 – 18:20	**Symposium ELI LILLY** ***Alimta (pemetrexed) prima linie de tratament în NSCLC*** **S. Negru**
18:20 – 18:35	**Symposium BAYER** ***Impact of sorafenib dosing on outcome from the European patient subset of the GIDEON study*** **Adina Croitoru**
18:35 – 18:55	**Symposium NOVARTIS** ***Rolul terapiei țintite în tratamentul de linia întâi al melanomului metastatic*** **A.Ungureanu** ***Perspective terapeutice în tratamentul sarcoamelor de țesuturi moi*** **TBD**
18:00 – 19:40 **HERA ROOM**	**RSRMO 25th Festive General Meeting** **Only members SRROM**

Posters Sessions

Session A – Friday, 16 October 2015, 11:50 – 12:10
Moderators: T.E. Ciuleanu, A. Moga

1. METFORMIN ASSOCIATED WITH PHOTODYNAMIC THERAPY – A NOVEL ONCOLOGICAL DIRECTION AGAINST MELANOMA

Nenu Iuliana[1], Tudor Diana[1], Olteanu Diana[1], Popescu Tiberiu[1], Filip Adriana[1], Baldea Ioana[1]

[1]"Iuliu Hatieganu" University of Medicine and Pharmacy – Physiology Department, Cluj, Romania

2. ANTINEOPLASTIC EFFECTS OF METFORMIN ENHANCE ANTITUMORAL EFFECT OF PHTALOCYANINE-MEDIATED PHOTODYNAMIC THERAPY AGAINST MALIGNANT MELANOMA

Tudor Diana[1], Nenu Iuliana[2], Popescu Tiberiu[3], Olteanu Diana[4], Decea Nicoleta[5], Filip Adriana[6], Baldea Ioana[7]

[1]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,[2]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,[3]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,[4]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,[5]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,[6]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,[7]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca

3. LIPOSARCOM DE COAPSA – ABORDAREA RADIOTERAPEUTICA POSTCHIRURGICALA PRIN TEHNICA IMRT

Păguțe Ovidiu Nicolae[01], Mihăilă George Cristian[01], Mireștean Camil[01], Firtea Cosmin Mihai[01], Manea Elena[01], Iancu Dragos Teodor[01,02]

[1]Institutul Regional de Oncologie Iasi,[2]Universitatea de Medicina si Farmancie Gr.T.Popa Iasi

4. A RARE TUMOR – PRIMARY LEIOMYOSARCOMA OF PULMONARY ARTERY. CASE PRESENTATION

Laura Rebegea[1,2], Dorel Firescu[2,3], Mihaela Dumitru[1]

[1]1 "Sf. Ap. Andrei" Emergency Clinical Hospital, Radiotherapy Department, Galati,[2]2"Dunarea de Jos" University of Galati, Faculty of Medicine, Clinical Department,[3]3 "Sf. Ap. Andrei" Emergency Clinical Hospital, Surgery Clinic II, Galati

Session B – Friday, 16 October 2015, 14:15 – 15:00
Moderators: G. Kacso, C. Cainap

5. STUDIU DE CAZ: INTEGRAREA SCINTIGRAFIEI OSOASE IN DIAGNOSTICUL IMAGISTIC AL LIMFOMULUI LIMFOPLASMOCITAR

Iulia Andreea CHIRIAC[1], Olga NICULESCU[1], Raluca MITITELU[1], Catalin MAZILU[1], Mihaela Georgiana LEPUS[1]

[1]Laboratorul de Medicina Nucleara, Spitalul Universitar de Urgenta Militar Central "Dr. Carol Davila", Bucuresti

6. THE USE OF THREE-PHASE BONE SCAN IN SOFT-TISSUE NEOPLASMS – CASE REPORT

CARMEN TIPAR[1], RALUCA MITITELU[1], CATALIN MAZILU[1], OLGA NICULESCU[1]

[1]Dept of Nuclear Medicine Central Universitary Emergency Military Hospital "Dr Carol Davila", Bucharest

7. ASPECTUL IMAGISTIC SCINTIGRAFIC IN FIBROMATOZA AGRESIVA DESMOIDA – PREZENTARE DE CAZ

Iulia Andreea CHIRIAC[1], Olga NICULESCU[1], Raluca MITITELU[1], Catalin MAZILU[1], Carmen TIPAR[1], Emilian STEFAN[2], Mihaela Georgiana LEPUS[1]

[1]Laboratorul de Medicina Nucleara, Spitalul Universitar de Urgenta Militar Central "Dr. Carol Davila", Bucuresti, Romania,[2]Sectia Ortopedie-Traumatologie, Spitalul CF2, Bucuresti, Romania

8. ROLE OF POSITRON EMISSION TOMOGRAPHY (PET/CT) IN IDENTIFYING UNKNOWN PRIMARY IN PATIENTS WITH LUNG METASTASIS.

sukanta barai[1], Arun P[2], Gambhir G[3]

[1]Additional Professor, Dept of Nuclear Medicine,SGPGIMS,Lucknow.India,[2]Senior Resident, Dept of Nuclear Medicine,SGPGIMS,Lucknow.India,[3]Professor and Head,Dept of Nuclear Medicine,SGPGIMS,Lucknow.India

9. DERMATOFIBROSARCOMA PROTUBERANS

MIHAELA CRAESCU[1,2], LAURA REBEGEA[1,2], MIHAELA DUMITRU[1], DOREL FIRESCU[1,2], AUREL NECHITA[2,3]

[1]Emergency Clinical Hospital "Sf. Ap. Andrei" Galati, Romania,[2]
Faculty of Medicine and Pharmacy "Dunarea de Jos" University of Galati, Romania
,[3]Emergency Clinical Pediatric Hospital "Sf. Ioan",Galati, Romania

10. DOSIMETRIC COMPARISON AND EVALUATION OF RAPIDARC AND 3D-CRT TECHNIQUES FOR LEFT-SIDED BREAST CANCER

Anisoara Anghelache[01], Irina Butuc[01], Calin Gh. Buzea[01], Anamaria Constantin[01], Silvana Ojica[01], Mihaela Oprea[01], Manuela Oprisan[01], Alina Rogojanu[01], Alexandru D. Zara[01], Catalina Zetiu[01]

[1]IRO Iasi

11. NEUTROPHIL-TO-LYMPHOCYTE RATIO IS AN INDEPENDENT PROGNOSIS FACTOR IN STAGE IV LUNG ADENOCARCINOMA PATIENTS WITH BRAIN METASTASES

Teodora Alexa[1], Ingrith Miron[2], Marius Păduraru[1], Adela Calancea[1], Lucian Miron[1]

[1]Medical Oncology, University of Medicine and Pharmacy "Gr. T. Popa", Iaşi,[2]Pediatric Oncology, University of Medicine and Pharmacy "Gr. T. Popa", Iaşi

Session C – Friday, 16 October 2015, 17:35 – 18:00
Moderators: Petronela Rusu, S. Pop

12. CONSIDERATIONS ON THE PSYCHOTHERAPEUTIC TREATMENT FOR PATIENTS WITH NEOPLASIA

Clinical Psychologist Adina Moraru[01]

[1]Amethyst Radiotherapy Centre

13. TIME TRENDS AND SURVIVAL RATES OF ORAL CAVITY AND PHARYNGEAL CANCERS BY SITES, IN CLUJ COUNTY

Ofelia Şuteu[1,2], Patricia Şuteu[1,2], Daniela Coza[2], Florian Nicula[2], Patriciu Achimaş-Cădariu[1,2]

[1],,Iuliu Haţieganu" University of Medicine and Pharmacy Cluj-Napoca,[2],,Prof. Dr. Ion Chiricuţă" Oncology Institute, Cluj-Napoca, Romania

14. DOSIMETRIC VERIFICATION OF RAPIDARC TREATMENT PLANS IN PROSTATE CANCER

Aurel Chis[1,2], Veronica Mandea[2], Cristina Taflan[2]

[1]Institutul Oncologic "Prof. I. Chiricuta" Cluj,[2]Centrul de Diagnostic si Tratament Oncologic Brasov

	15. "EARLY DETECTIONS IN POST-THERAPEUTIC RELAPSES IN METASTATIC COLORECTAL CARCINOMA BY FOLLOWING UP SOME BLOOD IMMUNOLOGIC MARKERS" Nicoale Miron[3], Chereches Gabriela[1], Barbos Otilia[1], Rares Buiga[1], Ovidiu Balacescu[1], Dana Iancu[1], Nicolae Todor[1], Ciuleanu Tudor[1,2] [1]1.Oncologycal Institute "I.Chiricuta " Cluj-Napoca,[2]2. UMF Cluj-Napoca,[3]3. Internal Medicine and Surgery Clinic III Cluj-napoca **16.** RARE GYNECOLOGICAL TUMORS. CLINICIANS' VIEW. Todor Irina[1], Nagy Viorica[1,2], Rancea Alin[1,2], Coza Daniela[2], Todor Nicolae[2] [1]University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca,[2]Oncology Institute "Ion Chiricuta" Cluj-Napoca
20:00 – 22:00	**DINNER**

SATURDAY, 17 OCTOBER 2015

09:00 – 11:30 **HERA ROOM**	**Health Policy Session** **Moderators: V. Cernea, S. Pop**
09:00 – 09:15	***Health policies and cultural elements in oncology*** **S. Pop**
09:15 – 09:30	***Radiotherapy coverage in Romanian*** **V. Cernea**
09:30 – 09:45	***ESMO – MESC criteria for evaluating the new drugs*** **A. Eniu**
09:45 – 10:00	***The status of pediatric radiotehrapy in Romania and IAEA recommandations*** **Dana Cernea**
10:00 – 10:15	***Medisprof 5 years of experience in private oncology services*** **B. Lavoue**
10:15 – 10:30	***National Cancer Plan, between ambition and reality*** **C. Irimia**
10:30 – 11:30	**Symposium JANSSEN** ***Latest updates on the management of mCRPC*** **Eleni Efstathiou, M. V. Marinca**

09:00 – 11:30 **BETA ROOM**	**Postgraduate Medical Course : Contouring targets and organs at risk for pelvic cancers** **Coordinator: Conf. Dr. G. Kacso** **University of Medicine and Pharmacy „Iuliu Hatieganu" Cluj-Napoca** **a. Theoretical part:** **1. *Course objectives*** **G. Kacso** **2. *Target and organ at risk delineation for RECTAL cancer*** **G. Kacso** **3. *Target and organ at risk delineation for CERVIX cancer*** **Viorica Nagy** **4. *Target and organ at risk delineation for PROSTATE cancer*** **G. Kacso**
09:00 – 11:00 **STUDIO ROOM** **09:00 – 09:20** **09:20 – 09:40** **09:40 – 10:00** **10:00 -10:20** **10:20 – 10:40** **10:40 – 11:00**	**Course for Oncology Nurses and Technicians** **Coordinator: Dr. Claudia Ordeanu** **Institute of Oncology „Ion Chiricuta" Cluj-Napoca** ***Deschiderea programului*** ***Tratamentul durerii și treptele durerii*** **Claudia Burz** ***Radioterapia în tratamentul urgențelor și a bolii metastatice*** **Claudia Ordeanu** ***Utilizarea factorilor de creștere- Neupogen, Eritropoetina în afecțiunile neoplazice*** **Alexandra Gherman** ***Neutropenia febrilă*** **C. Cainap** ***Îngrijirea cateterelor** și a camerelor de implantare* **Zgaie Armeana**
11:30 – 11:45 **FOYER**	**Coffee break**
11:45 – 14:00 **HERA ROOM** **11:45 – 12:00** **12:00 – 12:15** **12:15 – 12:30** **12:30 – 12:45** **12:45 – 13:00** **13:00 – 13:15** **13:15 – 13:30**	**Varia Session** **Moderators: Edina Morvay Szabo, Adina Croitoru** ***Clinical experience with primary neuroectodermal adult brain tumor. Case presentation and review of the literature*** **Edina Morvay Szabo** ***Adjuvant chemotherapy in pancreatic adenocarcinoma*** **Adina Croitoru** ***Efficiency assessment of gemcitabine and carboplatin regimen in patients with urothelial carcinoma*** **T. Moisoiu** ***Prognostic factors in pacients with breast cancer and cerebral metastases –experience of Oncology Institute "Prof.Dr. I. Chiricuta"*** **Daniela Martin** ***Evaluating skin toxicity in head and neck cancer patients treated with IMRT*** **Silvia Negrean** ***Long term results in gist treatment – from the literature to our practice*** **Laurentia Gales** ***Biphenotypic acute leukemia and granulocyticmediastinal sarcoma. Agresiv cytostatic treatment and peripheral stem cell allotransplant*** **Alina Catana**

13:30 – 13:45	***A case of complete regression of a prostate adenocarcinoma treated with EBRT(external beam radiotherapy) and ADT (androgen deprivation)*** **C.M. Firtea**
14:45 – 14:00	***Our experience regarding hypofractionated radiotherapy in breast cancer*** **Amalia Constantinescu**
11:45 – 13:30 BETA ROOM	**Postgraduate Medical Course : Contouring targets and organs at risk for pelvic cancers Coordinator: Conf. Dr. G. Kacso University of Medicine and Pharmacy „Iuliu Hatieganu" Cluj-Napoca** **b. Practical part: contouring (pre- & postop). Real rectal, cervix or prostate cancer cases will be provided on electronic support, including cross sectional imaging Attendees are kindly asked to bring laptops**
11:20 – 13:30 STUDIO ROOM	**Course for Oncology Nurses Coordinator: Dr. Claudia Ordeanu Institute of Oncology „Ion Chiricuta" Cluj-Napoca**
11:20 – 11:40	***Principii de stadializare a cancerului*** **Nagy Viorica**
11:40 – 12:00	***Efectele secundare acute provocate de tratamentele citostatice – diagnosticul precoce și tratamentul acestora*** **Dana Iancu**
12:00 – 12:20	***Efectele secundare ale tratamentele moleculare țintite*** **Dana Iancu**
12:20 – 12:40	***Radioepitelita în tratamentul cancerelor ORL*** **Elisabeta Ciuleanu**
12:40 – 13:00	***Diagnosticul și tratamentul emboliei și edemului pulmonar*** **Alexandra Gherman**
13:00 – 13:20	***Efectele secundare ale tratamentului cu Zometa în afecțiunile neoplazice*** **Andreea Marita**
13:20 – 13:30	***Concluzii. Încheierea Cursului.***
14:00 – 14:15 HERA ROOM	**CONCLUSIONS – Congress closure**

15/10/2015

RESIDENTS' AFTERNOON

16:00 EVALUATION OF DOSIMETRY PARAMETERS AND THEIR CLINICAL IMPLICATION IN 3D CRT – IMRT – VMAT-RAPIDARC® RADIOTHERAPY TECHNIQUES FOR ESOPHAGEAL CANCER.
GC Mihaila[1], CC Mirestean[1], ON Pagute[1], Elena Manea[1], Irina Butuc[3], Silvana Ojica, Manuela Oprisan[3], Anamaria Constantin, Mihaela Oprea, Catalina Ursache[3], Alina Rogojanu Anisoara Anghelache[3], AD Zara C Buzea[3], DT Iancu[1,2]
[1]Regional Institute of Oncology Iasi,[2]Gr. T. Popa University of Medicine and Pharmacy,[3]Medical Physics Department, Regional Institute of Oncology Iasi
George Cristian Mihaila

16:10 VOLUMETRIC MODULATED ARC THERAPY IN THE TREATMENT OF RECTAL ADENOCARCINOMA: INITIAL EXPERIENCE
Elena Manea[1], Manuela Oprisan[2], Anisoara Anghelache[2], Silvana Ojica[2], Mihaela Oprea[2], Alina Rogojanu[2], Irina Butuc[2], Anamaria Constantin[2], AD Zara, C Buzea[2], Andreea Marinca[1]
[1]Radiotherapy Department, Regional Institute of Oncology Iasi,[2]Medical Physics Department, Regional Institute of Oncology Iasi
Elena Manea

16:20 SOLID PSEUDOPAPILLARY TUMOR OF THE PANCREAS: CLINICOPATHOLOGIC FEATURES AND MANAGEMENT OF 13 CASES
Bochis Ovidiu Vasile[1,2], Mihut Emilia[1], Buiga Rares[1], Irimie Alexandru[1,2]
[1]The Oncology Institute "Prof. Dr. Ion Chiricuta" Cluj-Napoca, Romania,[2]University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca, Romania
Ovidiu Vasile Bochis

16:30 TREATMENT WITH FOLFIRINOX IN LOCALLY ADVANCED AND METASTATIC PANCREATIC CANCER
Radu Vidra[1], Adina Nemes[1], Calin Cainap[1,2]
[1]Oncology Institute "Prof.Dr.Ion Chiricuta" Cluj-Napoca,[2]The "Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca
Radu Vidra

16:40 CHEMORESPONSIVNESS TO NEOADJUVANT CHEMOTHERAPY – NOVEL PROGNOSTIC FACTOR FOR PATIENTS WITH LOCALLY ADVANCED CERVCAL CARCINOMA.
Carpov Domnica[1], Andreea Marita[1], Nicolae Todor[1], Viorica-Magdalena Nagy[1,2]
[1]Oncology Institute "Prof. Dr. Ion Chiricuta" Cluj-Napoca,[2]University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca
Domnica Carpov

16:50 EFFICACY AND TOXICITY OF TREATMENT WITH CETUXIMAB IN METASTATIC COLORECTAL CANCER:THE EXPERIENCE OF THE ONCOLOGY INSTITUTE CLUJ-NAPOCA
Adina Nemes[1], Alina-Simona Muntean[1], Tudor Ciuleanu[1,2], Calin Cainap[1,2], Cristina Cebotaru[1]
[1]Oncology Institute "Prof.Dr.Ion Chiricuta" Cluj-Napoca,[2]The "Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca
Adina Nemes

17:00 THE ROLE OF SEQUENTIALITY IN THE MULTIDISCIPLINARY TREATMENT OF CERVICAL CANCER
Claudia-Diana Sabău, Amalia Zah, Sorin Gavriş, Mihai Mureşan, Nicolae Todor,Viorica Nagy[1], Mihai Mureşan,Viorica Nagy[2]
[1]"The Oncology Institute "Prof Dr Ion Chiricuţă", ClujNapoca,[2]Iuliu Haţieganu University of Medicine and Pharmacy Cluj-Napoca
Claudia-Diana Sabau

17:10 THREE-DIMENSIONAL CONFORMAL RADIOTHERAPY IN CERVICAL CANCER, STAGE IIB-IIIB: EXPERIENCE OF THE ONCOLOGY INSTITUTE "PROF.DR. ION CHIRICUTA" CLUJ-NAPOCA
Anamaria Sipos[1], Noemi Besenyodi[1], Claudia Ordeanu[1], Ovidiu Coza[1,2], Alin Rancea[1,2], Nicolae Todor[1], Viorica Nagy[1,2]
[1]Oncology Institute "Prof.Dr.Ion Chiricuta" Cluj-Napoca.,[2]University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca.
Anamaria Sipos

17:20 THE ROLE OF THE INDUCTION CHEMOTHERAPY FOLLOWED BY RADIOCHEMOTHERAPY IN ADVANCED RECTAL CANCER-ASSESSED BY MRI.
Andrea Craciunescu[1], Alina-Simona Muntean[1]
[1]Institutul Oncologic "Prof.Dr. Ion Chiricuta" , Cluj-Napoca
Andrea Craciunescu

17:30 CLINICAL ASPECTS AND RESULTS OF WHOLE BRAIN RADIOTHERAPY FOR MULTIPLE BRAIN METASTASES
Patricia Șuteu[1,2], Daniela Martin[1], Petronela Rusu[1], Valentin Cernea[1,2], Viorica Nagy[1,2]
[1]"Prof.Dr.I.Chiricuță" Oncology Institute Cluj-Napoca,[2]"Iuliu Hațieganu" University of Medicine and Pharmacy Cluj-Napoca
Suteu Patricia

17:40 SHORT-COURSE RADIOTHERAPY OUTCOMES IN NEOADJUVANT TREATMENT OF RECTAL CARCINOMAS
Hopirtean Claudiu[1], Dedean Florina[1], Fekete Zsolt[1,2], Muntean Alina[1]
[1]Oncology Institute "Prof. Dr. Ion Chiricuţă",[2]Iuliu Haţieganu University of Medicine and Pharmacy Cluj-Napoca
Claudiu Hopirtean

17:50 EFFICIENCY ASSESSMENT OF PACLITAXEL AND CARBOPLATIN REGIMEN IN PATIENTS WITH OVARIAN CANCER.
Amalia Moldovan[1], Tudor Moisiu[1], Daniel Sur[2], Costica Adrian Costin[2], Claudia Burz[1,2]
[1]UMF "Prof. Dr. Iuliu Hatieganu" Cluj Napoca,[2]Oncology Institute Cluj Napoca
Costica Adrian Costin

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MEDICAL PHYSICISTS (I)

14:45 CHARACTERISTICS OF BRACHYTHERAPY SOURCES USED FOR THE TREATMENT OF PROSTATE CANCER
Edina Dordai[1], Dan Dordai[2], Gabriel Kacso[3]
[1]Institutul Oncologic "Prof. Dr. I .Chiricuta" Cluj-Napoca,[2]Amethyst Radiotherapy Center Cluj,[3]Universitatea de Medicină și Farmacie "Iuliu Hațieganu" Cluj-Napoca
Edina Dordai

15:00 TREATMENT PLANNING USING VOLUMETRIC MODULATED ARC THERAPY FOR THORACIC TUMOURS
Popa Raducu[01], Ciocaltei Violeta[02], Adam Daniela[03], Suditu Mihai[04]
[1]Clinica de Radioterapie Amethyst Bucuresti,[2]Clinica de Radioterapie Amethyst Bucuresti,[3]Clinica de Radioterapie Amethyst Bucuresti,[4]Clinica de Radioterapie Amethyst Bucuresti
Raducu Adrian Popa

15:15 "HELICAL" AND "TOMODIRECT" TECHNIQUES FOR BREAST CANCER TREATMENT WITH TOMO HD SYSTEM
Papiu Mihaela[01], Radu Maria[02], Bucur Tudor Danut[03], Moga Adrian Stefan[04]
[1]Clinica Polisano, Sibiu, Romania,[2]Clinica Polisano, Sibiu, Romania,[3]Clinica Polisano, Sibiu, Romania,[4]Clinica Polisano, Sibiu, Romania
Mihaela AnaMaria Papiu

15:30 LEFT SIDED BREAST CANCER RADIATION THERAPY. TECHNICAL ISSUES OF TREATMENT PLANNING AND DOSE OPTIMIZATION.
Morvay Szabo Edina[01], Virag Vasile[02], Hardut Carmen[02]
[1]University of Oradea, Faculty of Medicine and Pharmacy,[2]Clinical Municipal Hospital "Gavril Curteanu " Oradea
Edina Eva Morvay Szabo

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MEDICAL PHYSICISTS (II)

16:00 DAILY IMAGE GUIDANCE WITH CONE-BEAM COMPUTED TOMOGRAPHY FOR HEAD AND NECK CANCER IMRT
Adina Madalina Badiu[1], Dan Demeter[1], Ovidiu Parv[1], Dan Dordai[1], Noemi Schultes[1], Renata Zahu[1]
[1]Amethyst Radiotherapy Center Cluj
Badiu Madalina

16:15 IMAGE GUIDANCE WITH CBCT IN LUNG CANCER RADIOTHERAPY
Claudia Irina Sarca[1], Dan Vatca[1], Daniela Persa[1], Lavinia Negrut[1], Andrea Eva[1], Renata Zahu[1]
[1]Amethyst Radiotherapy Center Cluj
Claudia Sarca

16:30 DOSIMETRIC CHECK-UP OF DOSE DISTRIBUTION CONSIDERING THE INFLUENCE OF POSITIONING ERRORS IN MODERN RADIOTHERAPY
Aurel Chis[1,2], Spunei Marius[2], Ioana Scarlatescu[2]
[1]Institutul Oncologic "Prof. I. Chiricuta" Cluj-Napoca,[2]Asociatia OncoHelp Timisoara
Aurel Chis

16:45 TREATMENT PLANNING USING VOLUMETRIC MODULATED ARC THERAPY FOR LUNG TUMOURS
M. Suditu[1]
[1]Amethyste Otopeni, Bucuresti
Suditu M.

17:00 INNOVATIVE TECHNOLOGIES: INDICATIONS & CLINICAL BENEFITS
M. Ozsahin[1]
[1]Radiation Oncologist, CHUV, Lausanne, Switzerland
Ozsahin M.

17:15 CLINICAL OUTCOMES AND CHALLENGES OF LUNG SBRT
Xavier Mirabel[1]
[1]Radiation Oncologist, Centre Oscar Lambret in Lille, France
Xavier Mirabel

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EPIDEMIOLOGY, SCREENING & DIAGNOSIS

10:00 TIME TRENDS OF INCIDENCE AND MORTALITY BY LUNG CANCER
Ofelia Șuteu[1,2], Daniela Coza[2], Luminița Blaga[2], Florian Nicula[2]
[1],,Iuliu Haţieganu" University of Medicine and Pharmacy Cluj-Napoca,[2],,Prof. Dr. Ion Chiricuță" Oncology Institute, Cluj-Napoca
Suteu Ofelia

10:15 INITIATIVES FOR IMPROVING DIAGNOSIS OF LUNG CANCER – WHAT IS DIFFERENT FOR ROMANIA?
Ruxandra Rajnoveanu[1], Florin Mihaltan[1], Ruxandra Ulmeanu[1]
[1]Societatea Romana de Pneumologie
Ruxandra Rajnoveanu

10:30 TIME-SCALE ENHANCEMENT OF CHEST RADIOGRAPHS IMPROVING CANCER DIAGNOSIS AND TREATMENT
Iolanda Dumitrescu[1]
[1]Institute of Oncology "Prof. Dr. Alexandru Trestioreanu" Bucharest, Romania
Iolanda Dumitrescu

10:45 WHY WE NEED TNM STAGING IN LUNG CANCER?
Vancea Dorin[1]
[1]Spitalul clinic "Dr. Victor Babes Timisoara", Clinica de pneumologie
Dorin Vancea

11:00 SOFTWARE-ASSISTED QUALITY IMPROVEMENT IN THORACIC X-RAY IMAGING AIDING CANCER FOLLOW-UP
Iolanda Dumitrescu[1]
[1]Institute of Oncology "Prof. Dr. Alexandru Trestioreanu" Bucharest Romania
Iolanda Dumitrescu

11:15 EARLY DETECTION OF LUNG CANCER AND DIAGNOSIS OF GENETIC PREDISPOSITION
Zsolt Fekete[1,2]
[1]UMF Iuliu Haţieganu Cluj-Napoca,[2]Institute of Oncology Prof. Dr, I. Chiricuță
Zsolt Fekete

16/10/2015

RADIOTHERAPY (I)

12:10 THE ROLE OF RADIOTHERAPY (RT) IN IMPROVING TREATMENT OUTCOME IN SMALL CELL LUNG CANCER (SCLC)
Petronela Rusu[1]

[1]Institute of Oncology "Ion Chiricuta", Cluj – Napoca, Romania
Petronela Rusu

12:25 THE ROLE OF RADIOTHERAPY IN TREATMENT OUTCOME IN LUNG CANCER – THE EXPERIENCE OF THE RADIOTHERAPY DEPARTMENT OF SIBIU
Adrian Moga[01], Maria Radu[02], Tudor Bucur[03], Mihaela Papiu[04]
[1]Polisano Clinic Sibiu,[2]Polisano Clinic Sibiu,[3]Polisano Clinic Sibiu,[4]Polisano Clinic Sibiu
Adrian Moga

12:40 THE FUTURE LOOKS BRIGHT – MULTIDISCIPLINARY APPROACH FOR LUNG RESECTIONS IN T4 DISEASE WITH GREAT VESSEL INVOLVEMENT.
Victor S. Costache[1,2], Mihai B. Chiloflischi[1], Radu Hulpus[1], Adrian Moga[1], Adrian Santa[1,2], Mugurel Bosanceanu[1]
[1]European Hospital Polisano Sibiu,[2]"Lucian Blaga" University of Sibiu
Victor Sebastian Costache

12:55 STATE OF ART IN THE INTENSITY MODULATED RADIOTHERAPY OF THE LUNG CANCER
Chiricuta IC[01]
[1]AMETHYST Radiotherapy Center, Otopeni, Romania
Ion – Christian Chiricuta

13:10 IS CONCOMITANT CHEMORADIATION AN UNDISPUTABLE GOLD STANDARD FOR LOCOREGIONALLY ADVANCED DISEASE?
Renata Zahu[1], Carmen Bodale[1], Andrei Ungureanu[1], Vlad Manolescu[1,2], Catalin Iacob[1], Gabriel Kacso[1,2]
[1]Amethyst Radiotherapy Center Cluj,[2]University of Medicine and Pharmacy Cluj Napoca
Renata Zahu

13:25 PRINCIPLES OF MEDICAL TREATMENT FOR NEUROENDOCRINE TUMORS
Rodica Anghel[1], Laurentia Gales[1], Xenia Bacinschi[1]
[1]Institute of Oncology "Prof Dr Al trestioreanu" Bucharest
Rodica Anghel

13:40 BRACHYTHERAPY FOR LUNG CANCER: UTOPIA OR REALITY IN ROMANIA?
Gabriel Kacsó[1,2], Maria Simon[3], Renata Zahu[3], Dan Dordai[2], Calin Pop[1,2], Catalin Iacob[2]
[1]UMF "Iuliu Hatieganu " Cluj,[2]RTC Amethyst Cluj,[3]Clinica Pneumoftiziologie "Leon Daniello" Cluj
Gabriel Kacsó

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RADIOTHERAPY (II)

15:00 DIFFERENT MODALITIES OF IRRADIATION IN SUPERIOR VENA CAVA COMPRESSION SYNDROME – HISTORICAL PERSPECTIVE
Mircea Savu[1], Amalia Constantinescu[1], Lucia Enciu[1], Alex Oprea[1], Valentin Gosu[1]
[1]Institutul Oncologic "Prof Dr. Alexandru Trestioreanu" Bucuresti
Mircea Savu

15:15 SBRT LUNG WITH TOMO IN HEIDELBERG
Tarcea Valentin[1]
[1]University of Heidelberg, Division of Radiotherapy
Valentin Tarcea

15:30 HYPOFRACTIONATION WITH TOMO IN HEIDELBERG
Adeberg Sebastian[1]
[1]University of Heidelberg, Division of Radiotherapy
Sebastian Adeberg

15:45 PULMONARY ADVERSE EVENTS IN COMBINED TREATMENT OF LOCALLY-ADVANCED NON-SMALL CELL LUNG CANCER (LA NSCLC)
Petronela Rusu[1]
[1]Institute of Oncology "Ion Chiricuta", Cluj – Napoca, Romania
Petronela Rusu

16:00 INCIDENCE, SEVERITY AND MANAGEMENT OF SKIN TOXICITY ASSOCIATED WITH EGFR INHIBITORS THERAPY IN HEAD AND NECK AND LUNG CANCER PATIENTS
Rodica Anghel[1,2], Laurentia Gales[1,2], Luiza Serbanescu[2], Oana Trifanescu[1,2]
[1]Al. Trestioreanu Bucharest Institute of Oncology ,[2]2"Carol Davila" University of Medicine and Pharmacy
Rodica Anghel

16:15 STATE OF ART IN THE INTENSITY MODULATED RADIOTHERAPY OF THE ESOPHAGEAL CANCER
Chiricuta IC[01]
[1]AMETHYST RADIOTHERAPY CENTER, Otopeni, Romania
Ion – Christian Chiricuta

16:30 ESOPHAGEAL CANCER. A RETROSPECTIVE STUDY FROM THE INSTITUTE OF ONCOLOGY PROF. DR. I. CHIRICUȚĂ.
Zsolt Fekete[1,2], Zeliko Dervišević[1], Zsuzsanna Pálfi[2], Alina Muntean[2], Gabriel Lazăr[2], Ștefan Hica[2]
[1]UMF Iuliu Hațieganu Cluj-Napoca,[2]Institute of Oncology Prof. Dr. I. Chiricuță
Zsolt Fekete

16:45 STRATEGIES OF NUTRITIONAL SUPPORT FOR THE ESOPHAGEAL CANCER PATIENT
Dr Ioana Irina Mateies[01]
[1]Amethyst Radiotherapy Center Cluj
Ioana Irina Mateies

17:00 TESTING NEW BIOHIBRID STRUCTURES FOR THERAPEUTIC POTENTIAL IN ONCOLOGY AND REGENERATIVE MEDICINE
Ioana-Carmen Brie[1], Olga Soritau[1], Catalin Popa[2], Noemi Dirzu[2], George Dindelegan[3]
[1]Institute of Oncology Prof. Dr. I. Chiricuta Cluj-Napoca,[2]Technical University Cluj-Napoca,[3]University of Medicine and Pharmacy Iuliu Hatieganu Cluj-Napoca
Ioana-Carmen Brie

16/10/2015

MEDICAL ONCOLOGY (I)

12:10 CHANGING LANDSCAPE IN THE METHODOLOGY OF THE CLINICAL TRIALS IN THE ERA OF TARGETED AND IMMUNE THERAPY OF CANCER
Jean Pierre Armand[1]
[1]Institute Gustave Roussy, Paris
Jean Pierre Armand

12:40 NSCLC MANAGEMENT 2015: AN UPDATE
Doru Paul[1,2,3]

[1]Hofstra North Shore-LIJ School of Medicine,[2]Hematology-Oncology Attending,[3]Monter Cancer Center, New York, USA
Paul Doru

13:05 CURRENT STATUS AND FURTHER PERSPECTIVES IN SQUAMOUS CELL NSCLC
Mircea Dediu[1]
[1]SANADOR Hospital Bucharest
Mircea Dediu

13:20 CURRENT AND FUTURE THERAPY FOR MESOTHELIOMA
Dana Clement[1]
[1]Regional Institute of Oncology, Iasi
Dana Clement

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MEDICAL ONCOLOGY (II)

15:00 SMALLCELL LUNG CANCER-PROMISES AND PITFALLS IN 2015
Lucian Miron[1,2]
[1]Disciplina de Oncologie, UMF „Gr.T. Popa" Iasi,[2]Institutul Regional de Oncologie Iasi
Lucian Miron

15:15 Malignant pleural mesothelioma- overview of the literature and 15 years experience of "Prof Dr Ion Chiricuta" Institute of Oncology Cluj-Napoca
Alexandra Gherman[1,2], Radu Vidra[1]
[1]"Prof Dr Ion Chiricuta" Institute of Oncology Cluj-Napoca,[2]"Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca
Gherman Alexandra

15:30 NEUROENDOCRIN TUMORS OF THE THORAX
Cainap Calin[1,2]
[1]University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj Napoca,[2]Oncology Institute "Ion Chiricuta" Cluj Napoca
Calin Cainap

15:45 DRUG INTERACTIONS IN THE THERAPY OF LUNG CANCER
Pharm. Budău Laura Veronica[1]
[1]Amethyst Radiotherapy Clinic Cluj
Laura-Veronica Budău

16:00 NONHODGKIN LYMPHOMA DIFFUSE LARGE B CELL CD20 + . DIFFICULTIES IN THERAPEUTIC MANAGEMENT
Catana Alina[1], Benedek Erzebeth[1], Beca Corina[1], Birlutiu Victoria[1], Mihaila Romeo[1], Sandu Mariana[1], Olariu Tania[1], Dobra Dina[1], Manitiu Ioan[1], Noor Cristina, Mondoc Lidia-Maria[1]
[1]Spitalul Judetean Sibiu, Clinica de Hematologie
Alina Catana

16/10/2015

POSTER A

11:50 METFORMIN ASSOCIATED WITH PHOTODYNAMIC THERAPY – A NOVEL ONCOLOGICAL DIRECTION AGAINST MELANOMA
Nenu Iuliana[1], Tudor Diana[1], Olteanu Diana[1], Popescu Tiberiu[1], Filip Adriana[1], Baldea Ioana[1]
[1]"Iuliu Hatieganu" University of Medicine and Pharmacy – Physiology Department, Cluj, Romania
Iuliana Nenu

11:55 ANTINEOPLASTIC EFFECTS OF METFORMIN ENHANCE ANTITUMORAL EFFECT OF PHTALOCYANINE-MEDIATED PHOTODYNAMIC THERAPY AGAINST MALIGNANT MELANOMA
Tudor Diana[1], Nenu Iuliana[2], Popescu Tiberiu[3], Olteanu Diana[4], Decea Nicoleta[5], Filip Adriana[6], Baldea Ioana[7]
[1]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,[2]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,[3]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,[4]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,[5]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,[6]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca,[7]"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca
Diana Tudor

12:00 LIPOSARCOM DE COAPSA – ABORDAREA RADIOTERAPEUTICA POSTCHIRURGICALA PRIN TEHNICA IMRT
Păguțe Ovidiu Nicolae[01], Mihăilă George Cristian[01], Mireştean Camil[01], Firtea Cosmin Mihai[01], Manea Elena[01], Iancu Dragos Teodor[01,02]
[1]Institutul Regional de Oncologie Iasi,[2]Universitatea de Medicina si Farmancie Gr.T.Popa Iasi
Ovidiu Nicolae Păguțe

12:05 A RARE TUMOR – PRIMARY LEIOMYOSARCOMA OF PULMONARY ARTERY. CASE PRESENTATION
Laura Rebegea[1,2], Dorel Firescu[2,3], Mihaela Dumitru[1]
[1]1 "Sf. Ap. Andrei" Emergency Clinical Hospital, Radiotherapy Department, Galati,[2]2"Dunarea de Jos" University of Galati, Faculty of Medicine, Clinical Department,[3]3 "Sf. Ap. Andrei" Emergency Clinical Hospital, Surgery Clinic II, Galati
Laura Rebegea

16/10/2015

POSTER B

14:15 STUDIU DE CAZ: INTEGRAREA SCINTIGRAFIEI OSOASE IN DIAGNOSTICUL IMAGISTIC AL LIMFOMULUI LIMFOPLASMOCITAR
Iulia Andreea CHIRIAC[1], Olga NICULESCU[1], Raluca MITITELU[1], Catalin MAZILU[1], Mihaela Georgiana LEPUS[1]
[1]Laboratorul de Medicina Nucleara, Spitalul Universitar de Urgenta Militar Central "Dr. Carol Davila", Bucuresti
Iulia Andreea Chiriac

14:20 THE USE OF THREE-PHASE BONE SCAN IN SOFT-TISSUE NEOPLASMS – CASE REPORT
Carmen Tipar[1], Raluca Mititelu[1], Catalin Mazilu[1], Olga Niculescu[1]
[1]Dept of Nuclear Medicine Central Universitary Emergency Military Hospital "Dr Carol Davila", Bucharest
Carmen-Mihaela Tipar

14:25 ASPECTUL IMAGISTIC SCINTIGRAFIC IN FIBROMATOZA AGRESIVA DESMOIDA – PREZENTARE DE CAZ
Iulia Andreea CHIRIAC[1], Olga NICULESCU[1], Raluca MITITELU[1], Catalin MAZILU[1], Carmen TIPAR[1], Emilian STEFAN[2], Mihaela Georgiana LEPUS[1]
[1]Laboratorul de Medicina Nucleara, Spitalul Universitar de Urgenta Militar Central "Dr. Carol Davila", Bucuresti, Romania,[2]Sectia Ortopedie-Traumatologie, Spitalul CF2, Bucuresti, Romania
Iulia Andreea Chiriac

14:35 ROLE OF POSITRON EMISSION TOMOGRAPHY (PET/CT) IN IDENTIFYING UNKNOWN PRIMARY IN PATIENTS WITH LUNG METASTASIS.
Sukanta Barai[1], Arun P[2], Gambhir G[3]
[1]Additional Professor, Dept of Nuclear Medicine,SGPGIMS,Lucknow.India,[2]Senior Resident, Dept of Nuclear Medicine,SGPGIMS,Lucknow.India,[3]Professor and Head,Dept of Nuclear Medicine,SGPGIMS,Lucknow.India
Sukanta Barai

14:40 DERMATOFIBROSARCOMA PROTUBERANS
MIHAELA CRAESCU[1,2], LAURA REBEGEA[1,2], MIHAELA DUMITRU[1], DOREL FIRESCU[1,2], AUREL NECHITA[2,3]
[1]Emergency Clinical Hospital "Sf. Ap. Andrei" Galati, Romania,[2] Faculty of Medicine and Pharmacy "Dunarea de Jos" University of Galati, Romania,[3]Emergency Clinical Pediatric Hospital "Sf. Ioan", Galati, Romania
Mihaela Craescu

14:45 DOSIMETRIC COMPARISON AND EVALUATION OF RAPIDARC AND 3D-CRT TECHNIQUES FOR LEFT-SIDED BREAST CANCER
Anisoara Anghelache[01], Irina Butuc[01], Calin Gh. Buzea[01], Anamaria Constantin[01], Silvana Ojica[01], Mihaela Oprea[01], Manuela Oprisan[01], Alina Rogojanu[01], Alexandru D. Zara[01], Catalina Zetiu[01]
[1]IRO Iasi
Alexandru Dumitru Zara

14:50 NEUTROPHIL-TO-LYMPHOCYTE RATIO IS AN INDEPENDENT PROGNOSIS FACTOR IN STAGE IV LUNG ADENOCARCINOMA PATIENTS WITH BRAIN METASTASES
Teodora Alexa[1], Ingrith Miron[2], Marius Păduraru[1], Adela Calancea[1], Lucian Miron[1]
[1]Medical Oncology, University of Medicine and Pharmacy "Gr. T. Popa", Iaşi,[2]Pediatric Oncology, University of Medicine and Pharmacy "Gr. T. Popa", Iaşi
Teodora Alexa

16/10/2015

POSTER C

17:35 CONSIDERATIONS ON THE PSYCHOTHERAPEUTIC TREATMENT FOR PATIENTS WITH NEOPLASIA
Clinical Psychologist Adina Moraru[01]
[1]Amethyst Radiotherapy Centre
Adina Moraru

17:40 TIME TRENDS AND SURVIVAL RATES OF ORAL CAVITY AND PHARYNGEAL CANCERS BY SITES, IN CLUJ COUNTY
Ofelia Şuteu[1,2], Patricia Şuteu[1,2], Daniela Coza[2], Florian Nicula[2], Patriciu Achimaş-Cădariu[1,2]
[1],,Iuliu Haţieganu" University of Medicine and Pharmacy Cluj-Napoca,[2],,Prof. Dr. Ion Chiricuţă" Oncology Institute, Cluj-Napoca, Romania
Ofelia Suteu

17:45 DOSIMETRIC VERIFICATION OF RAPIDARC TREATMENT PLANS IN PROSTATE CANCER
Aurel Chis[1,2], Veronica Mandea[2], Cristina Taflan[2]
[1]Institutul Oncologic "Prof. I. Chiricuta" Cluj,[2]Centrul de Diagnostic si Tratament Oncologic Brasov
Aurel Chis

17:50 "EARLY DETECTIONS IN POST-THERAPEUTIC RELAPSES IN METASTATIC COLORECTAL CARCINOMA BY FOLLOWING UP SOME BLOOD IMMUNOLOGIC MARKERS"
Nicoale Miron[3], Chereches Gabriela[1], Barbos Otilia[1], Rares Buiga[1], Ovidiu Balacescu[1], Dana Iancu[1], Nicolae Todor[1], Ciuleanu Tudor[1,2]
[1]1.Oncologycal Institute "I.Chiricuta " Cluj-Napoca,[2]2. UMF Cluj-Napoca,[3]3. Internal Medicine and Surgery Clinic III Cluj-Napoca
Gabriela Chereches

17:55 RARE GYNECOLOGICAL TUMORS. CLINICIANS' VIEW.
Todor Irina[1], Nagy Viorica[1,2], Rancea Alin[1,2], Coza Daniela[2], Todor Nicolae[2]
[1]University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca,[2]Oncology Institute "Ion Chiricuta" Cluj-Napoca
Irina Todor

17/10/2015

HEALTH POLICY

9:00 HEALTH POLICIES AND CULTURAL ELEMENTS IN ONCOLOGY
Stelian Pop[1]
[1]Emergency County Hospital Satu Mare, Oncology
Stelian Pop

9:15 RADIOTHERAPY COVERAGE IN ROMANIAN
Valentin Cernea[1,2]
[1]University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj Napoca,[2]Oncology Institute "Prof. Dr. Ion Chiricuta" Cluj Napoca
Valentin Cernea

9:30 ESMO – MESC CRITERIA FOR EVALUATING THE NEW DRUGS
Alexandru Eniu[1]
[1]Oncology Institute "Prof. Dr. Ion Chiricuta" Cluj Napoca
Alexandru Eniu

9:45 THE STATUS OF PEDIATRIC RADIOTEHRAPY IN ROMANIA AND IAEA RECOMMANDATIONS
Dana Michaela Cernea[1]
[1]Oncology Institute "Prof. Dr. Ion Chiricuta" Cluj-Napoca
Dana Michaela Cernea

10:00 MEDISPROF 5 YEARS OF EXPERIENCE IN PRIVATE ONCOLOGY SERVICES
Anghel Adrian Udrea[01], Brendan Lavoue[01]
[1]Medisprof srl
Brendan Lavoue

10:15 NATIONAL CANCER PLAN, BETWEEN AMBITION AND REALITY
Irimia C.[1]
[1]Association of Cancer Patients from Romania
Irimia C.

17/10/2015

VARIA

11:45 CLINICAL EXPERIENCE WITH PRIMARY NEUROECTODERMAL ADULT BRAIN TUMOR. CASE PRESENTATION AND REVIEW OF THE LITERATURE
Morvay Szabo Edina[01], Mihutiu Simona[01]
[1]Faculty of Medicine and Pharmacy, University of Oradea
Edina Eva Morvay Szabo

12:00 ADJUVANT CHEMOTHERAPY IN PANCREATIC ADENOCARCINOMA
Adina Croitoru[1], Ioana Dinu[1], Iulia Gramaticu[1], Florina Buica[1], Ioana Luca[1], Traian Dumitrascu[2], Olimpia Dima[2], Cristian Gheorghe[3], Mihai Ciocarlan[2], Vlad Herlea, Mona Dumbrava,Gabriel Becheanu, Irinel Popescu[2]
[1]Fundeni Clinical Institute, medical oncology department,[2]Fundeni Clinical Institute, digestive surgery Clinic and liver transplantation,[3]Fundeni Clinical Institute, gastroenterology clinic
Adina Croitoru

12:15 EFFICIENCY ASSESSMENT OF GEMCITABINE AND CARBOPLATIN REGIMEN IN PATIENTS WITH UROTHELIAL CARCINOMA.
Tudor Moisoiu[1], Amalia Moldovan[1], Daniel Sur[2], Dan Luchian[2], Adrian Costin[2], Claudia Burz[1,2]
[1]University of Medicine and Pharmacy Cluj-Napoca,[2]Cancer Institute " I Chiricuta" Cluj-Napoca
Daniel Sur

12:30 PROGNOSTIC FACTORS IN PACIENTS WITH BREAST CANCER AND CEREBRAL METASTASES – EXPERIENCE OF ONCOLOGY INSTITUTE "PROF.DR. I.CHIRICUTA"
MARTIN DANIELA[1], CHIRIAC VALENTINA-FINETA[1], TODOR NICOLAE[1], GODJA GEORGEL[1], HOSU SORIN[1], TANASESCU RADU[1]
[1]The Oncology Institute "I. Chiricuta", ClujNapoca
Valentina-Fineta Chiriac

12:45 EVALUATING SKIN TOXICITY IN HEAD AND NECK CANCER PATIENTS TREATED WITH IMRT
Silvia Negrean[1], Oana Sipos[1], Daniel Vatca[1], Dan Dordai[1], Noemi Schultes[1], Renata Zahu[1]
[1]Amethyst Radiotherapy Center Cluj
Silvia Negrean

13:00 LONG TERM RESULTS IN GIST TREATMENT – FROM THE LITERATURE TO OUR PRACTICE
Laurentia Gales[1], Rodica Anghel[1], Xenia Bacinschi[1]
[1]Institute of Oncology "Prof Dr Al trestioreanu" Bucharest
Laurentia Gales

13:15 BIPHENOTYPIC ACUTE LEUKEMIA AND GRANULOCYTICMEDIASTINAL SARCOMA. AGRESIV CYTOSTATIC TREATMENT AND PERIPHERAL STEM CELL ALLOTRANSPLANT.
Catana Alina[1], Benedek Erzebeth[1], Ioan Manitiu[1], Miclea Ion[1], Dobrea Camelia[1], Cocisiu Gabriela[1], Mocanu Liliana[1], Zaharia Ioan[1], Mihaila Romeo[1], Olariu Tania; Dr. Sandu Mariana; Dr. Dobra Dina; Dr. Noor Cristina Mondoc Lidia-Maria[1]
[1]Spitalul Judetean Sibiu, Clinica de Hematologie
Alina Catana

13:30 A CASE OF COMPLETE REGRESSION OF A PROSTATE ADENOCARCINOMA TREATED WITH EBRT (EXTERNAL BEAM RADIOTHERAPY) AND ADT (ANDROGEN DEPRIVATION)
Firtea Cosmin Mihai[1], Mihaila George[1], Mirestean Camil[1], Pagute Ovidiu[1], Calistru Tudor[1], Iancu Dragos[1]
[1]IRO Iasi
Cosmin Mihai Firtea

14:45 OUR EXPERIENCE REGARDING HYPOFRACTIONATED RADIOTHERAPY IN BREAST CANCER
Amalia Constantinescu[1,2], Mircea Savu[1,2], Viorica Primjdie[1,2], Lucia Enciu[1,2], Alex Oprea[1,2]
[1]Institutul Oncologic "Prof. Dr. Alexandru Trestioreanu" Bucuresti,[2]Clinica NeoLife Bucharest
Amalia Constantinescu

ABSTRACTS

15/10/2015

RESIDENTS' AFTERNOON

EVALUATION OF DOSIMETRY PARAMETERS AND THEIR CLINICAL IMPLICATION IN 3D CRT – IMRT – VMAT-RAPIDARC® RADIOTHERAPY TECHNIQUES FOR ESOPHAGEAL CANCER.

GC Mihaila[1], CC Mirestean[1], ON Pagute[1], Elena Manea[1], Irina Butuc[3], Silvana Ojica, Manuela Oprisan[3], Anamaria Constantin, Mihaela Oprea, Catalina Ursache[3], Alina Rogojanu Anisoara Anghelache[3], AD Zara C Buzea[3], DT Iancu[1,2]

[1]Regional Institute of Oncology Iasi,[2]Gr. T. Popa University of Medicine and Pharmacy,[3]Medical Physics Department, Regional Institute of Oncology Iasi

Keywords: esophagus, dosimetry, irradiation technique

Purpose/Objective(s): Esophageal cancer is a challenge in terms of establishing best therapy due to late diagnosis and aggressivity.

The study objective is to assess the dosimetric parameters with predictive role in cardiac and pulmonary complications for the patients with esophageal cancer through 3D Conformal (3D CRT), Intensity Modulated Radiation Therapy (IMRT) and Volumetric Modulated Arc Therapy (VMAT) – RapidArc® radiotherapy techniques.

Materials/Methods: The study included a total of 6 patients diagnosed with esophageal cancer and treated with curative intent in Radiotherapy Department of Regional Institute of Oncology Iasi between May 2013 – May 2015. Inclusion criteria for this study is the thoracic location and the total dose of 60Gy/30 fr.

Results: All patients received chemotherapy and radiotherapy.

Radiotherapy was delivered by 3D CRT tehnique but IMRT and VMAT-RapidArc® treatment plans were made for dosimetric comparison.

Evaluation was made for: target volume included in 95% isodose (V95) for the Planning Target Volume (PTV); lung volumes that received 5Gy (V5), 20Gy (V20), 30Gy (V30) and Mean Lung Dose (MLD); heart volumes that received 5Gy (V5), 50Gy (V50) and Mean Heart Dose (MHD) trough 3D CRT, IMRT, VMAT-RapidArc® tehniques.

All three tehniques provides a good coverage of the PTV in the 95% isodose.

Heart values for V5, V50 and MHD are within accepted range.

Decreased V20 and V30 without V5 increase for the lungs are obtained through IMRT. Values above 13Gy for MLD are associated with pulmonary toxicity and may constitute in some cases contraindication of IMRT.

VMAT-RapidArc® technique is associated with a significant decrease of V20 and V30 and the increase of V5. Values above 50% for V5 are associated with the deterioration of ventilatory function and quality of life and increased mortality.

Conclusions: For cases associated with pulmonary pathology and increased risk of radic acute pneumonia or patients receiving simultaneous chemotherapy, IMRT could be an alternative treatment option by reducing lung V30.

VMAT-RapidArc® could be a treatment option only in specific cases where it can be obtained a lung V5 below 50%.

VOLUMETRIC MODULATED ARC THERAPY IN THE TREATMENT OF RECTAL ADENOCARCINOMA: INITIAL EXPERIENCE

Elena Manea[1], Manuela Oprisan[2], Anisoara Anghelache[2], Silvana Ojica[2], Mihaela Oprea[2], Alina Rogojanu[2], Irina Butuc[2], Anamaria Constantin[2], AD Zara, C Buzea[2], Andreea Marinca[1]

[1]Radiotherapy Department, Regional Institute of Oncology Iasi,[2]Medical Physics Department, Regional Institute of Oncology Iasi

Keywords: rectal, VMAT, efficacy, toxicity

Purpose/Objective(s): Neoadjuvant radiochemotherapy is the standard treatment for locally advanced rectal cancer. The aim of this study is to evaluate external radiotherapy

technique volumetric modulated arc therapy (VMAT) with concurrent chemotherapy in terms of efficacy (tumor response) and acute toxicity at these patients.

Materials/Methods: They were inluded 7 patient treated with neoadjuvant radiochemotherapy in Radiotherapy Departament of Regional Institute of Oncology Iasi in January-April 2015. Patients were evaluated: clinical, colonoscopic, pelvic MRI, thorax and abdominal CT. The total dose of irradiotion was 50.4 Gy in 28 fractions and concurrent chemotherapy with capecitabine (1650 mg/m2/day, 5/7) was administrated. Acut toxicity was classificated by CTCAE v.4.0. Imaging reevaluation (pelvic MRI) was performed 4 weeks after treatment; at 8-10 weeks was performed surgical intervention, tumor response was assessed after IRM and histopatological restaging .

Results: The median age of the patients (p.) (4 men, 3 women) was 59 years (41-76). Patients were clinically staged IIIA (3p. – 2T2,1T3,2N2,1N1), IIIB (3p.- 2T2,1T3,3N2, IIIC (1p.- T3, N2). Primary tumor was located in the inferior rectum in 2p. (28.5%), middle rectum in 2p. (28.5%) and the superior rectum in 3p. (43%). In 2p. abdomino-perineal excision was performed while 5p. had lower anterior resection of the rectum. Evaluation of pelvic MRI showed T and N downstaging. The histopathological result showed 71.4% T and N downstaging. Acute toxicity were in majority grade I: leukopenia (6p., 85.7%; lymphopenia grade II, 3p., 42.8%), thrombocytopenia (28.5%), diarrhea (4p., 57.1%), cystitis radical (2p., 28.5%), radioepitelita (2p., 28.5%).

Conclusions: Our data indicate the feasibility of VMAT technique in patients with locally advanced rectal adenocarcinoma. Tumor responses were favorable, while acute toxicity was significantly reduced compared with conformational technique. These results could impose VMAT technique as a therapeutic standard in our institution, but requires validation on a higher number of patients, tracking late toxicities and local control rates in the long term.

SOLID PSEUDOPAPILLARY TUMOR OF THE PANCREAS: CLINICOPATHOLOGIC FEATURES AND MANAGEMENT OF 13 CASES

Bochis Ovidiu Vasile[1,2], Mihut Emilia[1], Buiga Rares[1], Irimie Alexandru[1,2]

[1]The Oncology Institute "Prof. Dr. Ion Chiricuta" Cluj-Napoca, Romania,[2]University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca, Romania

Background: Solid pseudopapillary tumor (SPT) of the pancreas is a rare neoplasm, representing about 1-3% of exocrine pancreatic neoplasms. SPT usually occurs in young females, without notable symptoms, with a low malignant potential and excellent prognosis.

Study design: A retrospective study during the period January 2005 – January 2015.

Patients and method: SPT patients admitted in our institution were reviewed by describing demographic data, clinicopathologic and radiological features, therapeutic management and prognosis records.

Results: Thirteen patients with SPT were identified (10 women and 3 men), with a median age of 30 years. The main clinical presentation was abdominal pain (92.3%) followed by abdominal discomfort (69.2%). The tumor was mostly located in the body or tail of the pancreas (77%), and the mean size was 8.2 cm. Regarding surgical approach there were 5 distal pancreatectomies with splenectomy, 3 body and tail pancreatectomies, 2 body and tail pancreatectomies with splenectomy, 2 pancreaticoduodenectomy, 1 partial enucleation and of all only 2 partial resections. Postoperative hematoxylin- eosin staining and immunohistochemistry confirmed the diagnosis in all cases. None of the patients had lymph nodes metastases. There was one case of local invasion and one of death due to postoperative complications. Four cases followed adjuvant systemic chemotherapy. Median follow-up was 18 months, without evidence of recurrence during this period.

Conclusion: SPT should always be considered in the differential diagnosis in young women with a pancreatic mass. Surgical resection is dictated by tumor location. The decision to administer systemic therapy must be individualized. Complete surgical excision is the treatment of choice, and is usually curative.

TREATMENT WITH FOLFIRINOX IN LOCALLY ADVANCED AND METASTATIC PANCREATIC CANCER

Radu Vidra[1], Adina Nemes[1], Calin Cainap[1,2]

[1]Oncology Institute "Prof.Dr.Ion Chiricuta" Cluj-Napoca, [2]The "Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca

Background and aims: Pancreatic cancer represents one of the localizations associated with poor prognosis and poor survival, many patients being diagnosed in locally advanced and metastatic stages. For over 15 years, gemcitabine-based therapy has been the standard-of-care in the first line treatment of metastatic pancreatic cancer. In recent years new treatment regimens were introduced in the oncologist's arsenal. Since 2012 FOLFIRINOX has been the standard treatment for patients with stage III and IV pancreatic cancer and good performance status, showing benfits in terms of progression free survival (PFS) without compromising the safety profile. This study conducted in the Oncology Institute "Prof.Dr.Ion Chiricuta" Cluj-Napoca (OICN) represents a retrospective study in which we analyzed the efficacy and toxicity of treatment with FOLFIRINOX in

patients with locally-advanced and metastatic pancreatic cancer. (LAMPCa). Methods: In this study were included 18 patients with histologically and imagistically confirmed LAMPCa who were treated with FOLFIRINOX in the first line in the OICN between January 2011-June 2015. All patients received chemotherapy with FOLFIRINOX until progression or unacceptable toxicity. The imagistic response was evaluated every four cycles according to the RECIST 1.1 criteria. Toxicity was evaluated at every chemotherapy cylcle according to CTCAE 4.0.The primary end-point was median progression free survival (PFS); secondary end-points were imagistic response and safety profile. Results: 18 patients with locally advanced (7, 39%) and metastatic (11, 61%) pancreatic adenocarcinoma were included in this study. Of the 18 patients included in this study 11 were women and 7 men, with a median age at diagnosis of 61 years (44-68 years old). A median of 7.5 cycles (1-31 cycles) of FOLFIRINOX were administered. The hematologic toxicity observed in FOLFIRINOX was mild or moderate, most common toxicities were grade 1-2. The most significant grade 3-4 hematologic toxicity was neutropenia, occurring in 39% of patients, with no febrile neutropenia recorded during treatment. 8 (44%) of patients required dose adjustments due to hematologic or digestive toxicity. Conclusion: Treatment with FOLFIRINOX demonstrates efficacy in patients with LAMPCa with manageable toxicity and it represents an option for the treatment of patients with locally-advanced and metastatic pancreatic cancer and good performance status.

CHEMORESPONSIVNESS TO NEOADJUVANT CHEMOTHERAPY – NOVEL PROGNOSTIC FACTOR FOR PATIENTS WITH LOCALLY ADVANCED CERVCAL CARCINOMA.

Carpov Domnica[1], Andreea Marita[1], Nicolae Todor[1], Viorica-Magdalena Nagy[1,2]

[1]Oncology Institute "Prof. Dr. Ion Chiricuta" Cluj-Napoca, [2]University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca

Background: Despite introducing in 1999 concurrent radio-chemotherapy (CRT) as standard of care, treatment of locally advanced cervical (LACC) still remains suboptimal due to a high rate of pelvic failures with or without systemic component. Thus, new therapeutic options are needed. Materials and methods: In this non-randomized, retrospective study conducted in the Oncology Institute "Prof Dr. Ion Chiricuta" we aimed: 1. To asses prognostic value of chemoresponsivness to neoadjuvant chemotherapy (NACT) in terms of survival and disease outcome; 2. To evaluate the relationship between tumor response to NACT and tumor response at the end of CRT as well as pathological response in patients with LACC treated with NACT before CRT or radical surgery (RS). Were included 136 patients with histologically proven, previously untreated stage IIB-IIIB cervical cancer treated in OICN between November 2010 – December 2012. All patients received 1-3 cycles of platinum based NACT: Paclitaxel+Carboplatin or Topotecan+Cisplatin followed by concurrent RCT to a total dose (TD) of 46 Gy/pelvis+10 Gy boost/cervix when patients were evaluated for surgery. Patients with favorable parametrial response underwent surgery. The rest of the patients received radiotherapy for definite therapy to a TD of 60Gy/pelvis+ 14Gy boost/cervix. Clinical response was evaluated by pelvic examination after completing the last NACT cycle, at the end of CRT and for operated patients by pathological outcome. Results: Baseline characteristics were: median age at diagnosis-52 years; stage IIB (30%), IIIA (42%), IIIB (28%). Complete and partial response rate (CR-PR) was 55% after NACT and a complete response (CR) rate of 24,3% at the end of CRT, statistically associated with response to NACT ($p<0.01$), NACT regimen ($p<0.01$), tumor size ($p<0.01$).The operability rate was 42.6% (58 patients) with pathological CR in 69% of patients statistically associated with CR-PR after NACT ($p<0.01$). The median follow up was 40 months. Overall survival at 3 years was 85% (CI 78-90) with better outcome for patients with CR-PR after NACT (90%) vs. SB (78%) $p=0.04$, and those who received 3 cycles of NACT (90%), $p=0.02$. Also better survival rates were obtained in patients with CR-PR after NACT who underwent surgery (92%) or CRT (90%) vs. patients with SD who received CRT(69%), $p<0.01$. Conclusion: The chemoresponsivness to NACT might represent a novel predictive marker for tumor response at the end of concurrent RCT, as well as pathological outcome and overall survival.

EFFICACY AND TOXICITY OF TREATMENT WITH CETUXIMAB IN METASTATIC COLORECTAL CANCER:THE EXPERIENCE OF THE ONCOLOGY INSTITUTE CLUJ-NAPOCA

Adina Nemes[1], Alina-Simona Muntean[1], Tudor Ciuleanu[1,2], Calin Cainap[1,2], Cristina Cebotaru[1]

[1]Oncology Institute "Prof.Dr.Ion Chiricuta" Cluj-Napoca,[2]The "Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca

Background and aims: This study conducted in the Oncology Institute "Prof.Dr.Ion Chiricuta" Cluj-Napoca (OICN) represents a retrospective study in which we analyzed the efficacy and toxicity of treatment with Cetuximab in patients with metastatic colorectal cancer (mCRC).

Methods: In this study were included 37 patients with histologically and imagistically confirmed mCRC who were

treated in the OICN between October 2005-December 2013. Patients received treatment with weekly Cetuximab and chemotherapy (CT) with FOLFOX or FOLFIRI regimens.

Results: Of the 37 patients included in this study 15 were women and 22 men, with a median age at diagnosis of 57 years (36-73 years old). 54% of patients had adenocarcinoma of the colon and 46% adenocarcinoma of the rectum. 26 patients had metastases confined to one site (liver) and 11 patients had multiple metastatic sites (liver, lung, peritoneum,lymph nodes).

A median of 24 cycles (4-163 cycles) of Cetuximab were administered. 57% of patients received CT with FOLFOX and 43% with FOLFIRI with a median of 8 cycles (3-16 cycles) of associated CT administered. 3% of patients presented complete reşponse (CR) during treatment with Cetuximab, 40% partial response (PR) and 57% stable disease (SD), evaluated according to the RECIST criteria. The biochemical response was evaluated in 54% of patients: 70% of the 20 patients presented a decline in the CEA levels of more than 50%(CEA>50%). RR was 43%. Median TTP was 10 months (2-40 months) and median PFS was 6 months (1-40 months).

Median OS was 20 months (1-76 months). At the time of this analysis five patients were still alive. Grade 1-2 hematological toxicity on all medullary lines were the most common hematological toxicity observed to treatment with Cetuximab associated with chemotherapy.Grade 3-4 hematologic toxicity occurred in 22% of patients, with a higher incidence of neutropenia. 84% of patients presented grade 1-2 cutaneous toxicity to the administration of Cetuximab, toxicity observed beginning with the second administration of Cetuximab. 16% of patients presented grade 3-4 cutaneous toxicity at a median of 16 cycles of Cetuximab administered.

There was no difference in the overall response rate to Cetuximab plus chemotherapy when analysed by sex (47% F vs. 41% M), concomitant CT regimen (44% FOLFOX vs. 43% FOLFIRI) and biochemical response (36% CEA >50% vs 50% CEA<50%).

Conclusion: Treatment with Cetuximab associated to chemotherapy demonstrates efficacy and safety in patients with mCRC, as the results we have obtained show,results that are consistent with recently published data. Results of the latest trials with Cetuximab have propelled it in the first line treatment of patients with mCRC

THE ROLE OF SEQUENTIALITY IN THE MULTIDISCIPLINARY TREATMENT OF CERVICAL CANCER

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Background: Cervical cancer benefits from multidisciplinary treatment that associates radiation therapy, chemotherapy and surgery. The sequentiality of these treatment modalities has major importance in obtaining therapeutic results.

Objectives: To analyze the impact of different treatment association and sequencing options in terms of results in patients with cervical cancer treated in the Oncology Institute "Prof Dr Ion Chiricuţă", Cluj-Napoca.

Material and method: The study included 69 patients with cervical cancer, treated between 01-12/2008 in the Oncology Institute "Prof Dr Ion Chiricuţă", Cluj-Napoca, according to one of the following options: exclusive surgery, neoadjuvant radiotherapy (RT) with or without (±) chemotherapy (CT) followed by surgery (S), respectively surgery followed by adjuvant radiotherapy±chemotherapy. Results: The median age at diagnosis was 50 years (28- 75). 40 (58%) patients had stage I disease, 23 (33%) stage II and 6 (9%) stage III. A number of 15(22%) patients had exclusive S, 20(29%) patients had S followed by RT±CT and 34(49%) patients had neoadjuvant RT±CT followed by S. The 5 year OS for patients in stage I was 85% and in stages II-III 76% (p=0,11). In patients with neoadjuvant RT±CT followed by S, the 5-year OS was 88%, and for patients with S followed by adjuvant RT±CT was 74% (p=0.4). In patients with neoadjuvant RT±CT followed by S, there were 17 (25%) complete pathological responses in the surgical specimen. The 5-year OS in patients receiving neoadjuvant RT±CT followed by S was 94% for patients with complete pathological response compared to 82% for patients with residual disease.

Conclusions: Although not statistically significant, there was a 14% benefit in OS for patients with neoadjuvant RT±CT followed by S, demonstrating the superiority of RT±CT as first sequence compared to S in the multimodal treatment of cervical cancer. These results justify the extension of the study to a larger number of cases.

THREE-DIMENSIONAL CONFORMAL RADIOTHERAPY IN CERVICAL CANCER, STAGE IIB-IIIB: EXPERIENCE OF THE ONCOLOGY INSTITUTE "PROF.DR. ION CHIRICUTA" CLUJ-NAPOCA

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Purpose: The objective of this study was to evaluate local tumor control, toxicity and overall survival, after 3D external beam radiotherapy (3DCRT), in patiens with stage IIB-IIIB cervical cancer.

Methods: In this study were included 209 patients, treated with 3DCRT in IOCN Cluj, between 2011–2013, all histologically confirmed, stage IIB-IIIB cervical cancer. 50% of the patients received between two and five cycles of neoadjuvant chemotherapy(NACT). All underwent concurrent radio-chemotherapy(RCT) with Cisplatin or Carboplatin. At 46Gy/23fr + cervical boost, all patients were evaluated for surgery and for those with favorable parametrial response surgery(S) was performed, the other ones received 60Gy/30fr on the pelvis + cervical boost. 3DCRT was delivered with high-energy, 16 MV photon beams, using four-field technique, with standard fractionation.

Results: Median age was 51 years [22-83], in stage IIB were 102p(48.80%), IIIA 62p(29.67%) and IIIB 45p(21.53%), squamous cell carcinoma was predominant in 181p (86.61%), median tumor size was 4cm[1-10]. 100 patients performed NACT. 47p(22.48%) performed NACT + RCT, 53p(25.36%) NACT + RCT + S, 52p(23,88%) exclusive RCT and 57p(27.27%) RCT + S.

55% of the 110p operated patients presented pCR(pathological complete response). At a median follow-up of 26.7 months, 169 p (80.86%) presented CR, 2p (0.96%) PR, 3p (1.44%) ST and 35p(16.75%) PD. Local control obtained was 87.56% and overall survival at 2 years was 91% IIB, 84% IIIA and 76% for IIIB.

In terms of late toxicity, the incidence of grade 3-4 bladder and rectum morbidity was 0.96% and 0%, and vaginal stenosis grade 2 and 3 was 2.87% and 1.44%.

Conclusion: 3DCRT gives a significantly good target coverage and leads to a better local control and survival for cervical cancer patients. It also caused a low incidence of grade 3-4 toxicity in the bladder and rectum. Loco-regional failure remains the main cause of failure, with local recurrence rate demonstrating the main objective indication of 3DCRT, in terms of minimizing the complications in healthy tissues correlating with disease stage.

THE ROLE OF THE INDUCTION CHEMOTHERAPY FOLLOWED BY RADIOCHEMOTHERAPY IN ADVANCED RECTAL CANCER-ASSESSED BY MRI.

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Obiective: Obiectivul principal al studiului este evaluarea cu rezonanta magnetica nucleara a eficacitatii chimioterapiei de inductie si a radiochimioterapiei concomitente (RCT) la pacienti cu adenocarcinom de rect avansat loco-regional . Obiective secundare: toxicitate, complianta, rata de rezectie R0, RMN corelat cu raspunsul histopatologic.

Material si Metoda: Pacientii inclusi in studiu au efectuat 4 cicluri de CT de inductie CapeOx (Capecitabina si Oxaliplatin) si RCT concomitenta preoperatorie. Toti pacientii au fost restadializati RMN dupa fiecare secventa terapeutica cu scopul evaluarii eficacitatii tratamentului de inductie, tradus prin reducerea dimensiunii tumorii primare (T), reducerea numerica si in dimensiune a adenopatiilor (N) si a evaluarii MRF. TME a fost planificata la 6 saptamani dupa terminarea RCT.

Rezultate: In perioada ianuarie-iunie 2015, 31 de pacienti diagnosticati clinic si imagistic cu adenocarcinom de rect stadiul cTNM II si III, au fost inclusi intr-un studiu prospectiv de faza II in cadrul Institutului Oncologic „Prof. Dr.Ion Chiricuta" Cluj-Napoca. Toti pacientii au terminat tratamentul neoadjuvant. RMN efectuat inainte de debutul tratamentului a relevat un stadiu clinic cT2 la 9,68%, cT3 la 80,65%, cT4 la 9,68% din pacienti, cN0 la 3,2%, cN1 la 54,84%, cN2 la 38,7%, cN3 la 3,2%; 74,19% au prezentat invazia fasciei mezorectului (MRF+). Dupa chimioterapia de inductiei, restadializarea prin RMN a evidentiat reducerea in dimensiuni a TP la 54,8% din pacienti, a N la 35,48%; MRF a devenit negativa la 39,13% din pacienti. RMN de restadializare post RCT a evidentiat un raspuns T la 41,93% din pacienti, pentru N: 35,48% ; MRF negativa a fost inregistrata la 64,28% . Eficacitatea tratamentului neoadjuvant a fost demonstrata prin: reducerea in dimensiuni a T la 93,55% pacienti, in numar si dimensiune a N la 77,41% si 86,96% din pacienti au avut MRF negativa. Din 31 de pacienti, TME s-a efectuat, pana in prezenr, la 11 pacienti. S-au inregistrat 4 raspunsuri complet patologice (pCR), raspuns partial la 5 pacienti si boala stabila la 2 pacienti. Rata de rezectie R0, pana in prezent, a fost 100%. Complianta la tratament a fost 100%. Nu s-au inregistrat toxicitati G3,4;

Concluzii: Eficacitatea chimioterapiei de inductie cu Capecitabina si Oxaliplatin (CapeOx) urmata de radio-chimioterapia concomitenta (RCT) a fost demonstrata prin reducerea substantiala in dimensiuni a tumorii primare, a reducerii in dimensiune si numar a adenopatiilor, MRF negativ ceea ce creste rata de rezectie R0. Toxicitatea inregistrata a fost de G1 si G2, rezultand o complianta la tratament de 100%.

Cuvinte cheie: cancer de rect, chimioterapie de inductie, radiochimioterapie concomitenta, RMN

CLINICAL ASPECTS AND RESULTS OF WHOLE BRAIN RADIOTHERAPY FOR MULTIPLE BRAIN METASTASES

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Background: In the past decades, overall survival for cancer patients increased, bringing along the challenges of palliation for symptoms and clinical situations, in order to improve progression-free survival and quality of life. An important

proportion of cases addressed for radiotherapy in "Prof. Dr.I.Chiricuţă" Oncology Institute Cluj-Napoca are in need of palliative treatment for brain metastases. Standard treatment for multiple brain metastases is whole brain radiotherapy (WBRT), alongside medical management of symptoms.

Objectives: To analyze clinical characteristics and outcomes of patients with brain metastases from different primary tumors and to compare various WBRT regimens in terms of median survival time.

Materials and methods: A retrospective study was performed using data on patients with multiple brain metastases who received WBRT in our institution during 7.01.2013-20.12.2013. We included patients with all sites of primary tumors. Patients who underwent complete surgery for oligometastatic disease were excluded from the analysis.

Results: A total of 102 patients with brain metastases were included. The median age at the diagnosis of the primary was 58 years. The male to female ratio was 1.3:1. The most frequent primary site was lung with 56 cases (54.9%), followed by breast in 22 cases (21.57%), melanoma in 9 (8.82%), gynecologic tumors in 8 cases (7.84%) and digestive tumors in 7 (6.86%). A proportion of 19.6% of cases (20 patients) were diagnosed with brain metastases at the time of the initial diagnosis of the primary. The remainder 82 patients (80.4%) developed brain metastases later in the course of the disease. In these patients, the median time from diagnosis of the primary to the development of brain metastases was 15 months. There were 54 patients (52.9%) not metastatic (brain or other sites) at diagnosis. In these patients, local control of the primary after treatment with curative intent was obtained for 51.85%. The median time from diagnosis of brain metastases to the initiation of WBRT was 7 days. The most employed WBRT regimen was 5X4 Gy in 50 cases (49%), followed by 10X3 Gy in 36 cases (35.3%), 4X5 Gy in 13 cases (12.7%) and 1X8 Gy in 3 cases (4%). The median survival with brain metastases was 5 months for all patients. Patients who underwent WBRT with the 5X4 Gy regimen had 5 months survival, followed by 10X3 Gy with 4 months, 4X5 Gy with 3 months and 1X8 Gy with one month.

Conclusions: Lung and breast cancer were the most frequently associated with brain metastases. The 5X4 Gy regimen was the most commonly used in our institution, entailing a median survival superior to the other regimens, although the difference in survival may be due to individual prognostic factors which led to the choice of a certain regimen. Further studies are required in order to identify prognostic factors necessary for stratification of patients in view of deciding the optimal radiotherapy regimen.

SHORT-COURSE RADIOTHERAPY OUTCOMES IN NEOADJUVANT TREATMENT OF RECTAL CARCINOMAS

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Objectives: Evaluation of local control and overall survival in patients with rectal adenocarcinoma who received short-course radiotherapy (25Gy/5 fractions) followed by surgery.

Materials and methods: Between 2000 and 2011 a number of 62 patients with rectal carcinoma were treated in the Oncology Institute "Prof. Dr. Ion Chiricuţă" and received neoadjuvant short-course radiotherapy (25Gy/5 fractions) followed by surgery.

Results: 62 patients were identified: 37 men (59.6%) and 35 women (40.4%); 60 (96.7%) had adenocarcinoma histology. The median follow-up was 59.5 months and the median age was 61 years, 3 (4.8%) patients were stage I, 28 (45.2%) patients stage II, 26 (42%) stage III and 5 patients (8%) were stage IV disease. A number of 35 (56.5%) patients had the tumor located at over 5 cm from the anal orifice (AO), 27 patients (43.5%) had the tumor located in the inferior rectum (<5 cm from AO). 59 patients underwent surgery, 44 (70.97%) abdominoperineal resection and 15 (24.19%) lower anterior resection. 5-year overall survival (OS) was 58% (CI: 45%-69%), disease specific survival (DSS) was 72% (CI: 59%-82%). Patients under 60 years had a better OS than the ones over 60 years: 75% vs. 42% ($p<0.01$). OS in patients with stage II was superior to that of patients with stage III disease (88% vs. 53%, $p=0.01$). OS considering the distance to AO was better in patients with tumors located at <5cm from AO (86% vs. 61%, $p=0.03$). Local control was obtained in 44 patients (70.97%), 18 patients (29.03%) developed local failure.

Conclusions: Short-course radiotherapy is a viable therapeutic option for patients with early rectal carcinoma, offering a good local control and OS.

EFFICIENCY ASSESSMENT OF PACLITAXEL AND CARBOPLATIN REGIMEN IN PATIENTS WITH OVARIAN CANCER.

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Abstract: Efficiency assessment of Paclitaxel and Carboplatin regimen in patients with ovarian cancer.

Ovarian cancer represent the fith type of cancer in women being the fourth cause of death by cancer in women. Only a small percentage of women with epithelial ovarian cancer can be treated with surgery alone. Chemotherapy with a platinum agent and a taxane (paclitaxel) is considered the standard of care for treatment of ovarian carcinoma.

Methods: A total of 24 patients with stage III–IV received six courses of chemotherapy PT at 3-week intervals.

The aim of this study was to evaluate the toxicity of this regimen, the response to treatment and to investigate the predictive and prognostic value of tumor marker CA 125. The patients were treated using Paclitaxel 175 mg/m 2 IV over 3 h plus carboplatin area under the curve (AUC) 6 IV over 30 min on day 1; every 21 d for three to six cycles . Median age of patients was 55 (range between 41-73).

Results: The treatment was generally well tolerated. The most frequent grade 3-4 toxicity were hematologic and neurologic (62% vs 48%). The most frequent grad 1-2 nonhematologic toxicity was nausea and vomiting (78%). The overall response rate was 70.8%. with a good correlation between the value of CA 125 and the response to chemotherapy, being a good factor of prognostic of the treatment.

Conclusion: TC is active in patients with ovarian cancer and has a acceptable toxicity profile. CA125 represents a important biomarker for monitoring the response of treatment.

15/10/2015

MEDICAL PHYSICISTS (I)

CHARACTERISTICS OF BRACHYTHERAPY SOURCES USED FOR THE TREATMENT OF PROSTATE CANCER

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Prostate cancer is one of the most common forms of cancer in men. Brachytherapy has been widely used for treatment, as a standalone option or boost to external beam radiotherapy. Short half time and low energy photons emitting radioactive sources are used for permanent implants (125 I and 103Pd ~30keV). Also temporary implants use fractionated or single session HDR brachytherapy treatments usually with 192 Ir source (0.38MeV) .

The good results of brachytherapy treatments determined the development of new sources to increase efficiency. For the clinical use of these sources AAPM Task Group No 43 recommends accurate determination of all the relevant dosimetric data both experimentally and theoretically before use.

The aim of this work was to compare the physical and dosimetric characteristic of a few brachytherapy sources used for the treatment of prostate cancer.

TREATMENT PLANNING USING VOLUMETRIC MODULATED ARC THERAPY FOR THORACIC TUMOURS

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Volumetric modulated arc therapy (VMAT) is a novel form of intensity modulated radiation therapy that allows the radiation dose to be delivered in a single or double gantry rotation using modulated fields.

Lung radiation injury is a critical complication of radiotherapy (RT) for thoracic esophageal carcinoma (EC). Therefore, the goal of this study was to investigate the feasibility and dosimetric effects of reducing the lung tissue irradiation dose during RT for thoracic EC by applying volumetric modulated arc radiotherapy (VMAT).

The capability of VMAT to reduce heart and cord dose, while maintaining lung receiving 20 Gy < 35% was evaluated for esophageal cancer. Also the PTV coverage was evaluated according ICRU recomandations.

The quality assurance for each treatment planning is another goal of this type of treatment technique and ensures that the treatment will be delivered correctly.

By analyzing all cases treated in our clinic, we can say that VMAT plans resulted in superior dose distribution with a reduction in dose to lung and heart.

VMAT can be a better option in treating thoracic tumours.

"HELICAL" AND "TOMODIRECT" TECHNIQUES FOR BREAST CANCER TREATMENT WITH TOMO HD SYSTEM

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Aims: The goal of this work was to implement new planning strategies for breast cancer treatment with

TomoDirect and TomoHelical techniques by using the TomoHD system of Polisano Clinic, Sibiu.

Materials: The TomoHD accelerator has a special geometry similar with that of a helical CT scanner. The 6MV accelerator is mounted on a slip ring gantry. The generated beam passes through a primary collimator and is collimated into a fan beam shape. Further collimation and modulation is obtained by using a binary MLC. During treatment, the ring gantry continuously rotates while the patient is translated through the beam plane. The patients were immobilized by using Orfit Thorax Abdomen Lateral support and AIO base plate.

Methods: There are presented IMRT treatment plans for different breast cancer cases in order to prove the feasibility and the benefits of helical tomotherapy (HT) for complex situations such as breast/chest wall with positive axillary and supraclavicular lymph nodes. The standard tangential technique remains the base for breast cancer treatment when no lymph nodes are involved. Comparative studies have been discussed by making helical and tangential plans for the same patient in order to analyze which are the benefits and the drawbacks of each method (PTV coverage, average doses for organs at risk and the treatment time).

Conclusions: The advantages of helical tomotherapy include better conformity of treatment and homogeneity indexes, lowering the dosages to organs of risk, especially for heart and ipsilateral lung. The classical tangential technique is applied successfully for situations when only the breast/chest wall has to be irradiated or when the geometry of the patient thorax is suitable for this method even the lymph nodes are positive and must be irradiated. Similar results for the average dose for PTV (planning target volume), V20 and V5 for the ipsilateral lung were obtained with both techniques proving the feasibility of helical tomotherapy for breast cancer treatment.

LEFT SIDED BREAST CANCER RADIATION THERAPY. TECHNICAL ISSUES OF TREATMENT PLANNING AND DOSE OPTIMIZATION.

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Background: modern conformal 3D radiation therapy treatment planning should take into consideration an optimal overage of the target volume between the 95%-107% isodoze keeping the dose delivered to the organs at risk at the lowest level. Since radiation therapy is an important sequence in multimodal treatment of breast cancer, the authors studied different situations of left sided breast cancer. Material and Method: the authors have studied the possibilities of treatment planning with Isogray planning system for Siemens Artiste Linear Accelerator for 3D conformal radiation therapy with photons 6, 18 MV and or electron beam with MLC in different clinical situation of postmastectomy radiation therapy, irradiation after breast conservation surgery with or without irradiation of the regional lymphatic's. Results: after initial field setup the dose constrains for lung parenchyma V20≤15%;,V10≤35%; V5 V5≤50%, for the whole heart V20≤5%; V10≤30%, mean dose ≤400cGy, spinal cord <45Gy; thyroid gland<45Gy, brachial plexus <60-66Gy, esophagus mean dose <34Gy, whole organ<55Gy is taken into consideration after Enami paper and the Quantec paper. To achieve all these requirements the authors evaluate how changing the position of the patient's arm, how irradiation in a right oblique position and how irradiation with two isocenter versus one isocenter realizes all these constrains. Conclusion: for left sided radiation therapy of breast cancer, in the majority of the cases, both the dose at the level of target volume and the dose of radiation received by the organs at risk can be correctly covered by optimal isodoze set-up. In some cases of specific chest wall anatomy reduction of the mean heart dose can be achieved placing the patient on the breast board in a slightly right oblique position. Prone breast irradiation and different IMRT techniques should be studied in the future.

Keyword: breast cancer radiation therapy, target volume, organs at risk

15/10/2015
MEDICAL PHYSICISTS (II)

DAILY IMAGE GUIDANCE WITH CONE-BEAM COMPUTED TOMOGRAPHY FOR HEAD AND NECK CANCER IMRT

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Purpose: To evaluate daily positioning errors of patients undergoing intensity modulated radiotherapy for head and neck cancers.

Material and methods: We have included 40 patients with various cancers in the head and neck region, treated on our Elekta Synergy linear accelerator. All patients were immobilized with Civco thermoplastic masks.All patients received IMRT with a rotational technique VMAT. Patients were verified with daily or weekly CBCT. We have evaluated the translational errors in x,y,z direction in all patients, and also the rotational errors in 6 patients.

Results: In total a number of 1074 CBCT were studied. The mean set-up errors per patient varied between 0-2.6 mm (x), 0.6-2.6 mm (y), 0.4-2.9 mm (z).The overall population mean set-up errors were 2.1 mm, 2.1 mm, 2.4 mm in the lateral (x), cranio-caudal (y) and anterior-posterior (z) direction. The systematic errors for the population were 0.08 mm, 0.14 mm, 0.1 mm in the x,y,z.The individual random errors varied between 0.037 mm and 0.97 mm.The mean population random were 0.157 mm(x), 0.237 mm (y), 0.327 mm (z).

Mean rotational errors were 0.27°, -0.23°, -0.12°.

Conclusions: CBCT is an effective way to analyze and correct random and systematic set-up errors.Calculating the mean population set-up errors allows a reduction in the clinical target volume to planning target volume margins. In our clinic the margins have been reduced from 5 to 3 mm following the results of the first 20 patients.

IMAGE GUIDANCE WITH CBCT IN LUNG CANCER RADIOTHERAPY

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Purpose: The scope of our study was to determine the impact of setup errors identified by cone beam CT during radiotherapy for lung cancer.

Material and methods: We have included in this observational study 14 patients. Patients were treated on our 6 MV Linac (Elekta Synergy) with IMRT/VMAT technique. Image guidance was done with the cone beam CT mounted on the linac. Verification strategies were online with daily imaging or offline with e-NAL protocol (extended no action level). We have analyzed translational errors in x, y, z direction and rotational errors.

Results: A total of 383 CBCTs were done. 13 patients had daily imaging, 1 patient had weekly imaging. Individual mean setup errors in the x, y, z directions varied between 0.2 and 4.2 mm in the x direction, 0.1 and 4.3 mm in the y direction and 0.1 and 3 mm in the z direction. Overall population mean setup errors: x = 0,5 mm, y = 0.7 mm, z = 0 mm. The systematic component for the population is x= 0.2 mm, y=0.3 mm, z=0.2 mm . Population random error were: x = 0.7 mm, y = 0.7 mm, z = 0.4 mm. Mean rotational errors for 5 patients were -0,2 degrees on the x axis, -0,1 degrees on the y axis and 0,1 degrees on the z axis. In one patient we have noted an asymptomatic pneumothorax during radiotherapy which needed treatment interruption because of possible geometrical miss.

Conclusion: CBCT is an effective method to use in daily or weekly image guidance strategies especially in this patient population where it can identify changes like pneumothorax, atelectasis in the irradiated lungs.

DOSIMETRIC CHECK-UP OF DOSE DISTRIBUTION CONSIDERING THE INFLUENCE OF POSITIONING ERRORS IN MODERN RADIOTHERAPY

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Aim: Compared to the classic iradiation treatment plans, the usage of 3D imaging (CT – simulation) and modern radiotherapy planning systems, offeres the possibility of a much better control of the dose distribution. Having a higher control over the treatment plan, modern accelerators allow the administration of the correct dose in the target volume vs the organs at risk. However, reproducing the patient's exact positioning every session of treatment as during scanning, remains another problem. This paper analyses the possible possitioning errors and their influence on the dose distribution.

Material and method: The simulated treatment plans for VMAT technique were used for measurements,usingdifferent tumor sites. Theexperimental setup for dosimetric measurements consist of: CT-simulator "SIEMENS",

treatment plan system "ECLIPSE 13", Sun Nuclear ArcCheck using the software "SNC pacient 6.6".

In order to obtain dosimetric verification plans, the method was to convert real treatment plans. The check-up device (ArcCheck) was aligned with intentional positioning errors on each of the three axes up to 1 cm, independent from each other, and then rotated from the correct position up to 5°.

After the positioning errors were made, we determined the dose distribution according to gamma errors criteria.

Results: For positioning errors up to 1 cm or 5 degrees, which may be frequent if the immobilization or imaging methods for checking each treatment session are not used, under 50% of the measured points passed the gamma criterias (3% or 3mm).

Conclusions: In order to obtain a real correspondence between the theoretical dose distribution achieved in the treatment plan and the real dose distribution during treatment, quality assurance systems are needed: the correct use of the immobilization devices, portal imaging and dosimetry check-up systems.

TREATMENT PLANNING USING VOLUMETRIC MODULATED ARC THERAPY FOR LUNG TUMOURS

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INNOVATIVE TECHNOLOGIES: INDICATIONS & CLINICAL BENEFITS

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CLINICAL OUTCOMES AND CHALLENGES OF LUNG SBRT

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16/10/2015

EPIDEMIOLOGY, SCREENING & DIAGNOSIS

TIME TRENDS OF INCIDENCE AND MORTALITY BY LUNG CANCER

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Introduction: Lung cancer (LC) remains the most frequent cancer in men and the third most common in women worldwide. In developed countries, incidence and mortality rates are generally declining among males and are starting to plateau for females. In contrast, in less developed countries, increasing lung cancer rates are predicted to continue, due to endemic use of tobacco.

Objectives: To investigate time trends of incidence and mortality by LC in Romania (1982-2012) and Cluj County (1998-2010).

Material and method: Data on new cases were obtained from the Medical Evidence Centre of the Ministry of Health for the period 1982-2007 and from the GLOBOCAN Projects with estimated data for 2008 and 2012. Deaths were obtained from the WHO Database. Data on new cases and deaths by LC for Cluj County were obtained from the North-Western Cancer Registry. Crude (CRI) and age standardized incidence (ASIR) and mortality (ASMR) rates were computed, using the world standard population, by the direct method. For Cluj County, time-trends were analyzed using Joinpoint regression with annual percent change (APC) calculation with a 0.05 level of significance.

Results: In Romania, LC ranks first as incidence and mortality in men and forth as incidence and mortality in women. The estimated number of new cases in 2012 was 11644, representing 14.8% of cancer cases, of which 80% were in men. CRI increased in men from 32.14%000 in 1982 to 89.8%000 in 2012 and from 5.93 to 21%000 in women. ASMR increased by 44.17% in men, from 32.7 to 47%000 and 67.8% in women, from 5.7 to 9.6%000. International comparisons show that incidence and mortality rates for Romanian men are among the highest in Europe. In Cluj County, LC ranks first as incidence and mortality in men and fifth as incidence and second as mortality in women. During 1998-2010, there were 4297 cases, 82.8% in men. Mean age was 63.6 in men and 65 in women ($p=0.001$). ASIR remained constant in men (51.73%000 in 2010) but increased in women with 4.6% in the period 2000-2010, from 10.68 to 11.26%000 ($p=0.001$). ASIR of small cell carcinoma increased in both sexes, with 6.8% in women, from 1.09 to 1.36%000 ($p=0.08$) and 5.7% in men, from 3.17 to 5.86%000 ($p=0.006$). ASIR of squamous cell carcinoma decreased in men, from 35.91 to 17.72%000, with -5.2% ($p<0.001$) and in

women from 4.88 to 1.31%000, with -0.20% (p=0.19). ASIR of adenocarcinoma increased in men with 15.8%, from 1.46 to 9.82%000 (p<0.001), and in women with 0.18%, from 1.58 to 3.37%000 (p=0.05). ASMR remained stable in men between 2001-2010 (51.28%000 in 2010), but increased in women from 7.22 to 10.15%000 (p<0.001).

Conclusions: Given the increasing incidence and mortality of LC in our country, reflecting the changing smoking prevalence and the current lack of effective treatment for advanced lung cancers, these results highlight the need for tobacco reform to reduce tobacco use, especially in women to subsequently decrease the global burden of LC.

INITIATIVES FOR IMPROVING DIAGNOSIS OF LUNG CANCER – WHAT IS DIFFERENT FOR ROMANIA ?

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Lung cancer remains the largest cause of cancer deaths. It is the 7 th most common cause of cancer death in never smokers. Unfortunately, the majority of lung cancers are still diagnosed at late stages. The most important underlying risk factor for lung cancer is COPD greater than smoking. COPD patients have a 6 fold higher risk for COPD. 3/4 of the patients are in advanced stages at admittance. Diagnostic performance of lung cancer in experienced romanian bronchology centers is very good and is growing. In 2006, 85% of lung cancer were diagnosed by bronchoscopy in "Marius Nasta" Pneumology Institute. 25% of lung cancer had surgical eligibility after bronchoscopy and CT scan. 77% of NSCC that underwent bronchoscopy were stages III and IV. Significantly more non-smokers were diagnosed with adenocarcinoma vs smokers (p <0.001). "Marius Nasta"Institute of Pneumology has the largest bronchology center in Romania. Here are examined 60% of patients requiring bronchoscopy in Romania. Over 10 000 patients /year are investigated by bronchoscopy and, yearly, more than 4,000 patients are going for bronchoscopy for lung cancer. Recent data recommend therapeutic bronchoscopy as an instrument before curative lung surgery, converting inoperable tumors to operable. Rigid bronchoscopy is mandatory for the majority of circumstances. In patients with advanced stages of lung cancer the management is focused on palliation of symptoms and improving quality of life. In those cases, therapeutic interventional bronchoscopy is salutary.The initiatives for improving diagnosis of lung cancer in Romania are very complex and dynamic. The wide range of national conferences, workshops, lung cancer campaigns and specific task forces like the Working Group for Lung Cancer of the Lung Cancer Section of the Romanian Society of Pneumology together with the Practical Romanian Guidelines for Lung Cancer, The Bronchology Section of Romanian Society of Pneumology, all of these are examples of multidisciplinary efforts in the field of early diagnosis and treatment of lung cancer. Still, the need of support bronchoscopy to become an accessible investigation for each patient suspected of lung cancer in all country represent a goal to reach.

TIME-SCALE ENHANCEMENT OF CHEST RADIOGRAPHS IMPROVING CANCER DIAGNOSIS AND TREATMENT

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Introduction: One of the diseases with the highest mortality rate is lung cancer, which causes 3000 deaths each day in the world. It is the leading cause of cancer death among both men and women. These considerations highlight the relevance of performing massive accurate and early diagnosis.

Materials and method: Because in a radiograph some features can be hardly detectable by eye, it is desirable to transform images before display. Software-aided time-scale analysis may enhance the faintest edges and keep untouched the strongest. A biorthogonal overcomplete multiresolution decomposition of the original image will issue coefficients proportional to image-intensity variations and to local contrast. Aiming at image quality improvement, four independent enhancement techniques transform the coefficients:

1 – Linear enhancement linearly stretches them at multiscale level.

2 – Nonlinear enhancement employs a piecewise linear function that emphasizes the low-contrast features and avoids over-enhancement of high-contrast features.

3 – Sigmoid enhancement uses a mapping function that pushes down small coefficients related to noise, keeps unchanged the large ones and amplifies the others.

4 – Multiscale enhancement is based on a nonlinear adaptive function that modifies linearly, nonlinearly or keeps unchanged coefficients, according to noise level.

The enhanced image has been reconstructed from the enhanced coefficients. Planar and cross-section radiographs were considered.

Results: Linear enhancement leads to inefficient usage of the dynamic range, because it emphasizes high-contrast and low-contrast edges with the same gain. The drawback of nonlinear enhancement is that the parameters at each scale are global. Sigmoid enhancement amplifies weak edges and suppresses noise. Multiscale enhancement prevents unnecessary over-enhancement of noise.

Conclusions: Time-scale enhancement allows the user to see details which are hardly distinguishable in the original radiograph, by reducing the ratio of strong features to faint features. Speed is a good advantage.

WHY WE NEED TNM STAGING IN LUNG CANCER?

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SOFTWARE-ASSISTED QUALITY IMPROVEMENT IN THORACIC X-RAY IMAGING AIDING CANCER FOLLOW-UP

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Introduction: Lung cancer is the leading cause of cancer-specific mortality. The major medical societies include surveillance chest radiograph as part of the follow-up recommendations. The estimated annual cost for the treatment of lung cancer per patient is huge, but doubles for those who do not survive one year. It is requested to improve the investigations and lower costs.

In X-ray imaging of the chest, the image quality depends on the X-ray energy, body thickness and body composition. The final image is a complex sum of the interaction of the X-rays with all of the tissues in the path of the beam, but often lakes in quality.

Materials and method: Our software technique is based on a non-linear transform that combines the effects of convolving the image with surround functions with different scales. Narrow surrounds highlight the fine features, but tonal rendition is lost. Wide surrounds retain the tonal information, but do not enhance the small fine features. Scales in between the two extremes – medium scales – tend to enhance some small features and retain considerable tonal information, but typically lack overall tonal rendition.

We tested the software on chest X-ray images from radiograph databases.

Results: Multiple surrounds are needed to achieve a graceful balance between dynamic range compression and tonal rendition in radiographs. The number of scales used is application dependent. We tested a combination of three scales representing narrow, medium and wide surrounds, sufficient to provide both dynamic range compression and tonal rendition.

Conclusions: Chest radiographs are necessary in the evaluation of thoracic tumors, but they lake in contrast and sharpness. Our software technique improves their dynamic range and sharpness. The image quality obtained out-performs that one given by other multiscale techniques or the classical methods.

EARLY DETECTION OF LUNG CANCER AND DIAGNOSIS OF GENETIC PREDISPOSITION

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Over 50% of NSCLC and over 60% of SCLC are diagnosed in stage IV even in the setting of the most advanced health care systems and over 20% are found in stage III, where survival at 5 years is less than 40%. The percentages are similar in Romania, where in a recent study 45% of patients had stage IV disease, 32.5% in stage III, 16.3% were unstaged and only 3.3% had stage II and 3% stage I.

CT based screening of lung cancer in heavy smokers or moderate smokers with an additional risk factor is considered now a standard approach. According to the first screening trial published in 2006 in Lancet screening with CT finds 85% of tumors in stage I, where 5 year survival was 88%.

Never-smokers with emphysema have a similarly high risk for developing lung cancer, so experts advocate for extension of CT-screening to this category too.

Screening with CT is not optimal: it does not target moderate-risk individuals, the sensitivity is not 100%, around 20-40% of subsequent biopsies yield benign lesions and anxiety is a frequent problem in patients with a nodule of ≤8 mm. Thus, other, more advanced methods are needed to compensate for these imperfections. Proposed tests consist of blood tests (cytokines, miRNA), breath-tests and automated cytology of bronchial cells. A non-irradiating approach is a fast-MRI.

Genetic predisposition to lung cancer is complex, but some mutations are more prevalent than others are, which might offer the possibility to detect genetic predisposition in both smokers and non-smokers. Examples are SNP-Rs2352028 of 13q31.3 in never-smokers and SNP-Rs663048 of the Seizure 6-like (SEZ6L) gene.

Lung cancer has currently the highest mortality among malignant tumors, but with the implementation of these modern screening methods, the lethality and thus the mortality of this aggressive cancer could be markedly reduced.

16/10/2015
RADIOTHERAPY (I)

THE ROLE OF RADIOTHERAPY (RT) IN IMPROVING TREATMENT OUTCOME IN SMALL CELL LUNG CANCER (SCLC)

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Background: Major improvements of treatment outcome with RT in SCLC were the addition of RT to Chemotherapy (ChT) and prophylactic cranial irradiation (PCI) in limited disease (LD) as well as in extended disease (ED).

Purpose and Methods: For a further improvement in treatment outcome a review of literature and publications has been proceeded in order to answer questions concerning timing, fractionation, dose, volume and techniques of RT, and treatment decision for elderly patients.

Results: Although conflicting data and debatable evidence, further improvement in thoracic RT for LD can be summarized as use of RT as early as possible, preferably from the 2nd cycle of ChT in selected patients (pts), high but adapted intensity of RT concerning fractionation. For the appropriate volume the general approach is of inclusion in RT volume the initially involved lymph nodes but reduction of volume within pulmonary parenchyma according to ChT response and omission of elective nodal irradiation. Concerning technique a translation from NSCLC, with superior efficacy of 3D-CRT than 2D technique, is expected in SCLC as well.

The use of PCI raised also questions for further improvements concerning brain imaging, timing in relation to ChT-RT, neurocognitive functions and QoL, use in early stages and elderly patients. The change of diagnostic policy from CT to MRI in brain imaging led to increase of detected brain metastases (BM) from 10% to 24%, meaning stage migration and fewer pts eligible for PCI. The short doubling time of 4-16 days, for BM from SCLC suggest an early start of PCI but concomitant use with ChT should be avoided because of increased toxicity. Neurotoxicity (NT) increased also with higher total dose (p=0.03) and age. Neurocognitive functions as memory, communication and intellectual deficit worsened with time, therefore a hippocampal sparing technique has been proposed. Indication of PCI in early stages, especially in stage I should be weighted considering lower risk of BM versus higher risk of NT. Treatment in elderly needs a proper selection and evaluation of co-morbidity status, less intense ChT with earlier introduction of RT and carefully limited RT volume. Postoperative RT proved to be beneficial for N2 disease, but no benefit for early stages.

In Conclusion, an individualized, appropriate decision, should be used concerning volume, dose, fractionation and technique, in order to customize treatment according to patient needs.

THE ROLE OF RADIOTHERAPY IN TREATMENT OUTCOME IN LUNG CANCER – THE EXPERIENCE OF THE RADIOTHERAPY DEPARTMENT OF SIBIU

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Background: Radiotherapy represents one of the primary treatment modalities for patient with carcinoma of the lung. Second to surgery, it remains the modality with the highest response rates and potential for cure. With radiotherapy, local control is directly related to dose, as well as the technical accuracy with which the dose is delivered to the target volume.

Purpose and Methodes: The aim of this presentation is to present our experience of treatment outcome with radiotherapy in carcinoma of the lung.

Results: With the 2D- technology radiotherapy used there were serious limitations, it was nearly impossible to accurately delineate the target volumes and to estimate the normal tissue volumes that needed to be spared. The TomoHD treatment machine is a combination of a helical CT scanner and a linear accelerator. The unit is capable of continuous rotation around the patient while the couch is moving into the gantry, thus providing smooth helical delivery. The daily CT is used to precisely place the radiation beam and allows the operator to modify the treatment if the patient anatomy changes due to weight loss or tumor shrinkage.

Conclusions: The dose distribution is improved significantly. With the better ability to focus the radiation beams, higher doses can be delivered to the tumor. Lower doses are delivered to normal tissues resulting in lower complication rates. The net results should be an overall improvement of survival and in the quality of life.

THE FUTURE LOOKS BRIGHT – MULTIDISCIPLINARY APPROACH FOR LUNG RESECTIONS IN T4 DISEASE WITH GREAT VESSEL INVOLVEMENT.

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Introduction: Complete removal of all locoregional pathological tissues should be the goal of all surgical procedures to lung cancer. However most centers avoid operating patients with lung cancer or other intrathoracic tumors when mediastinal great vessels are involved

Methods: We selected four cases of mediastinal great vessels involvement (3 had NSCLC and one with immature teratoma) who were referred for resection between May 2014 and August 2015 to the University Clinic of Thoracic and Cardiovascular Surgery from the Polisano European Hospital in Sibiu. All cases were initially refused by other national centers of thoracic surgery, one was previously opened six month prior to our procedure and declared inoperable due to T4 cardiac involvement. All patient files were analyzed in a multidisciplinary oncological thoracic meeting (MDOTM). Indication for surgical resection is validated by all members of the MDOTM. All cases with intrathoracic tumours with great vessels involvement are completely screened for extrathoracic metastatic disease. For all thoracic resections, when great vessels involvement is validated by 128 multislice CT-scan, all patients benefit from a multidisciplinary surgical approach – the team is always formed by a thoracic and a cardiovascular surgeon with a extracorporeal pump, a cell saver and a perfusionist in stand-by on sight.

Results: All cases are hospitalized in the cardiovascular intensive care unit, in the immediate postoperative period. During the same period, due to careful preoperative planning and multidisciplinary diagnostic approach the rate of blank exploratory thoracotomy and of patients declared inoperable due to cardiac and great vessels involvement is zero. All patients had an uneventful postoperative course and were discharged at day 7. The patients are routinely followed up at 1, 6 and 12 months after surgery and have a multislice CT at 6 and 12 months after the surgical procedures. When indicated by the MDOTM, adjuvant chimio and radiotherapy were performed. No local or extrathoracic recurrences were yet diagnosed.

Conclusion: Multidisciplinary diagnostic and surgical approach is the key for successful treatment of intrathoracic tumors with cardiac and great vessels involvement with no metastatic disease. In 2015 there should be no more exploratory thoracotomies for lung or other intrathoracic tumors.

STATE OF ART IN THE INTENSITY MODULATED RADIOTHERAPY OF THE LUNG CANCER

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Introduction: The progress achieved in radioterapy make possible the delivery of an individualized treatment planning. The therapeutic indication is bazed on the tumor board decission. The tumor board includes all factors involved in the diagnosis and treatment delivery for lung cancer patients. The new TNM classification and the guidelines proposed by the radiation oncology societies (NCCN, ASTRO, ESTRO, DEGRO) are considered for the indication of radiotherapy in the treatment of the lung cancer patients. The consequences of the location of the primary lung cancer on the target volume delineation will be presented. The nutrition status monitoring is of importance to reduce the radiation esophagities to make possible the optimal treatment delivery and improvement of the patients compliance.

Materials and methods: The NSCLC lung cancer patients treated with preoperative neoadjuvant treatment, definitive radiochemotherapy or adjuvant radiochemotherapy were analysed. The radiotherapy planning procedure is based on the CT performed in the treatment position. CT slices at every 2 mm through the lower neck and the chest make possible the precise target volume and organs at risk (the lung, the spinal cord, the myocard) deliniation.

Results: The delineation of the target volumes is bazed on all the data obtained through the biopsy, surgery and the imaging procedures on each patient. The CTV (clinical target volume – microscopic disease) will include the intraparenchimal and the hilar lymph nodes as wel as the mediastinal lymphatics. The GTV (macroscopic disease) will include the primary NSCLC or the SCLC prior the induction chemotherapy. The PTV (planning target volume) should be considered based on the available guidelines. Organs at risk protection based on the guidelines recommendations is mandatory. The final planning is analized and all recommandations concerning the high dose delivery to the GTV, CTV as well as the maximum tolerance dose accepted at the different organs at risk are considered. We are using the VMAT (volume modulated arc therapy) the most modern intensity modulated radiotherapy technique. The daily treatment delivery is controled by using the portal imaging and the cone beam procedure. For NSCLC patients large total dose of 70 Gy/2 Gy or 66 Gy/2,3 Gy as concomitant boost with 1,8 Gy in 29 fractions should be applied on the primary tumor. The neoadjuvant radiochemotherapy was delivered till a total dose of 50 Gy in 2 Gy fractions.

Conclusions: The use of the IMRT radiotherapy and specially of the VMAT method make possible the delivery of a high quality of individualized treatment. High tumor control rates and less side effects through the protection of the organs at risk as the is thus possible. For definitive radiochemotherapy treatment the delivery of a high total dose on the tumor site as high as 70 Gy in daily fractions of 1,8 or 2,0 Gy is possible. The introduction of the supportive care to reduce weight loss produced through the radiation induced esophagities is mandatory.

IS CONCOMITANT CHEMORADIATION AN UNDISPUTABLE GOLD STANDARD FOR LOCOREGIONALLY ADVANCED DISEASE?

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Introduction: Locoregionally advanced NSCLC is a heterogeneous group of disease including large primaries T3-T4 with great vessel or thoracic wall extension or smaller T1-T2 tumours but with significant mediastinal lymph node involvement N2-N3. Several retrospective and prospective studies were conducted to define the optimal multimodal approach combining chemo-, radiotherapy and surgery in different order, but there is still a lot of controversy in choosing the optimal treatment combination. Methods: This sudy focuses on analyzing different decisional situations as well how new innovations in the field of radiotherapy, imaging and surgery can influence our decision. We have tried systematically to review results of recent studies, offering also a brief description of possible treatment failures and what is the role of different treatment modalities in local, regional and distant control.

Results: Combination of radiotherapy with chemotherapy is still the main treatment modality for majority of IIIB disease, but the role of induction followed by surgery is increasing in stage IIIA disease. Marginally operable IIIA disease is mainly composed of tumors with limited mediastinal lymph node involvement, but also N2 staging can significantly differ from patient to patient depending on which LN levels are interested and how bulky the disease is. Patients with micrometastatic disease and single station nodal involvement have the greatest chance for cure and surgery has a significant role in their treatment. Adding chemotherapy to radiotherapy has not only the role of radiosensitizing but also to eradicate possible microscopic distant disease. We have also reviewed the role of adding more chemotherapy or even targeted agents to concomitant chemoradiotherapy. New radiotherapy techniques as IMRT, IGRT and proton therapy can modify the toxicity profile and reduce treatment induced side effects such as esophagitis, pneumonitis and we may consider to offer more aggressive treatment and increased doses to further improve outcome.

Conclusion: Survival data show that there is still 20-30% of patients which can obtain a long term survival and more aggressive treatment options can be chosen in a selected group of patients and multidisciplinary approach being the key to success.

PRINCIPLES OF MEDICAL TREATMENT FOR NEUROENDOCRINE TUMORS

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Appropriate diagnosis and treatment of neuroendocrine tumors involves collaboration between specialists in multiple disciplines: pathologists, endocrinologists, radiologists, surgeons, oncologists.

Octreotidehave indications for the relief of symptoms. NCCN Guidelines states that octreotide LAR is a treatment option in patients with metastatic GEP-NETs which are symptomatic, or unresectabletumours with significant tumourburden, which are progressive or produce local effects.However, debate continued regarding the effect of octreotide LAR in controlling tumour growth. No clear consensus exists on the timing of octreotide initiation.

Interferon alpha has been shown in several large, non-randomized series an antitumor effect in patients with advanced carcinoid.Because of its potential side effects,is usually reserved as therapy after failure of octreotide.

Everolimus and sunitinib have recently been confirmed to have antitumor activity and to improve PFS in patients with advanced pancreatic neuroendocrine tumors.

Treatment with radiolabeled somatostatin analogues has been reported to result in tumor responses in patients with advanced carcinoid tumors.This approach remains investigational.

Cytotoxic chemotherapy is another option. Streptozocin is FDA approved for use in patients with advanced pancreatic neuroendocrine tumors. The combination of capecitabine and oxaliplatin was assessed, with response rates of 23% in patients with poorly differentiated neuroendocrine tumors and 30% in well-differentiated disease. More recently, oral temozolomide-based therapy has been used in patients with advanced pancreatic neuroendocrine tumors, alone or in combination with capecitabine. In addition, a recent phase II study assessed the safety and efficacy of temozolomide administered with bevacizumab.

Regarding NET situation in Romania we may note some aspects:

- Due to late diagnosis, many NET patients remain in treatment for short period of time
- Octreotide LAR is available in Romania since 2008
- The current NET Romanian protocol do not mention the antitumor effect of Octreotide
- Streptozocin is not available in Romania; Everolimus, Sunitinib, Temozolomide, Bevacizumabare not reimbursed

BRACHYTHERAPY FOR LUNG CANCER: UTOPIA OR REALITY IN ROMANIA?

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Brachytherapy can play a significant role in lung cancer treatment, particular in palliative setting but also as curative in intent, exclusive or adjuvant after radical surgery for early stages with positive stump or as a boost after RCT.

For T1-2NoMo inoperable lung cancers, exclusive HDR BT (6-7fr of 6-7 Gy) achieves 80 % local control with 60% five year survival (SV5) and as high as 90 % cancer specific SV5 but with 10 % severe haemoptysis and 5 % eso-tracheal fistulas, frequently fatal.

Adjuvant after positive bronchial stump surgery or as boost after RCT it improves the local control without proven benefit in survival.

In palliative setting, associated with endoscopic laser resections, BT significantly improves the quality of life, as it can control for several months 90 % of the haemoptysis, 80 % of major dyspnoea and 70 % of severe cough.

In a multidisciplinary team we implemented this technique as an operative and effective procedure in Cluj on just a few patients, without any severe complication.

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16/10/2015
RADIOTHERAPY (II)

DIFFERENT MODALITIES OF IRRADIATION IN SUPERIOR VENA CAVA COMPRESSION SYNDROME – HISTORICAL PERSPECTIVE

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Despite the huge progress in diagnostic and therapeutic approaches over the years, the superior vena cava compression syndrome still represents a challenge for radiotherapy. We present a historical perspective of radiotherapy techniques, starting with conventional radiotherapy to modern techniques, such as 3D conformal and IMRT. Unfortunately, 85% of patients die within 1 year from diagnosis, but modern techniques decrease significantly the rate of acute and late complications and improve the quality of life.

SBRT LUNG WITH TOMO IN HEIDELBERG

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HYPOFRACTIONATION WITH TOMO IN HEIDELBERG

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PULMONARY ADVERSE EVENTS IN COMBINED TREATMENT OF LOCALLY-ADVANCED NON-SMALL CELL LUNG CANCER (LA NSCLC)

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Background: Several endpoints and scoring scales have been used to define radiotherapy (RT)-induced lung injury. As terminology,it isacontinuing processtriggered after RT comprising two distinct but tightly connected abnormalities. Radiation pneumonitis (RP)is an early inflammatory reaction, followed by pulmonary fibrosis in the late phase.Currently combinedchemoradiotherapy (ChRT) became standard of care in patients (pts) withLA NSCLC and different radiation schedules and chemotherapy combinations are in clinical use, in order to improve outcome.

Objectives: SymptomaticRP is a clinically important toxicity occurring in 15-40% of pts receiving concurrent ChRT for NSCLC. The risk of RP limits the radiation dose that can be safely delivered and the size of the volumes treated and may thus hamper tumor control. On the other hand, RP can limit quality of life and can result in oxygen dependence or death,leading to the need of predictive factors of RT induced lung injury.

Methods and Materials: A review of literature,the Quantitative analysis of normal tissue effects in the clinic (QUANTEC) project and an individual patient data meta-analysis are analyzed to find predictive factors of RT induced lung injury.

Results: Several studieshave identified relationships between rates of RP and baseline patient related factors (age, gender, smoking, tumour location, PS, pulmonary

dysfunctions, elevation of TGF beta 1 levels post RT), or treatment related factors such as treatment volume, total dose, dose/fraction, chemotherapy agents. Predictive modelshave not been widely implemented for several reasons: different endpoints, criteria and scales, heterogeneous groups of pts. On the other hand, to choose Dose/Volume parameters is challenging as there are no clear "thresholds" and the acceptable risk varies with the clinic scenario. Despite these limits, in pts undergoing concurrent ChRT for NSCLC, RP risk is associated with age over 65 years, type of chemotherapy regimen and dosimetric parameters. It is prudent to limit V20 to <35%, MLD to<20-23Gy to maintain the risk of RP under20%. From the experience of dose escalation studies and SBRT, limiting the dose to the central airways to ≤80 Gy, might reduce the risk of bronchial stricture and hemoptysis. The benefit of decreasing a dosimetric parameter (e.g. V20) at the expense of another(e.g. raising the V5) in 3DCRT and IMRT isnot entirely known. Targeted agentsin combined treatment, do not seem to add benefit but toxicity and thus are reserved to be used only in clinical trials.

Conclusion and perspectives: Progress regarding the predictors of RT induced lung injury requires a better definition of endpoints, a multi-institutional database to further understand the impact of clinical factors, systemic agents, organ interactions, radiation response modifiers. Patient Reported Outcome (PRO) should also be be integrated in clinical trials to assess toxicity.

INCIDENCE, SEVERITY AND MANAGEMENT OF SKIN TOXICITY ASSOCIATED WITH EGFR INHIBITORS THERAPY IN HEAD AND NECK AND LUNG CANCER PATIENTS

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Introduction: Epidermal growth factor receptor (EGFR) inhibitors are widely used in treatment of squamous cell carcinoma of the head and neck (SCCHN) and lung cancer (LC). Their use can be associated with the development of skin reactions, including a macular, papular, pustular rash, commonly referred to as acne-like rash (or folliculitis); xerosis; telangiectasia; hyperpigmentation and hair and nail changes.

Patients and methods: Forty seven patients were treated in our centre between 2011-2015 with monoclonal antibody against EGFR (cetuximab) (n=27, 57.4%) or EGFR tyrosine kinase inhibitors (erlotinib) (n=20, 42.6%) in SCCHN and LC. Dermatological changes were assessed by a multidisciplinary team consisting of an oncologist, radiotherapist and dermatologist.

Results: Incidence of all grades acneiforme eruptions with cetuximab treatment was 74% (n=20), with grade 2 toxicity (define as 10% to 30% the body surface area covered in papules or pustules) in 11patients (44.4%) and grade 3 define as papules and/or pustules covering >30% BSA, in 2 patients (10%). In patients treated with erlotinib the incidence of all grade acneiform rash was 55% (n=11) with 1 patient with grade 3 toxicity. The median time to onset of symptoms was 3.4 months after starting the treatment. Nail changes were a late toxicity and was present in 8.5% of patients. Hair changes consisted in mild hair loss and in one female patient hypertrichosis on the face. Hyperpigmentation was seen following acneiform eruption in 53.2% of patients. Treatment consisted in general measures (hydration of skin, sun screening, and emollient cream) in all patients and administration of hydrocortisone 1% cream. In addition for grade 2 and 3 acneiform rash oral doxycycline 100 mg/day was administered.

Conclusion: Cutaneous effects of EGFR inhibitors represent is a unique side-effect and has to be rapidly treated in order to increase the quality of life of the patients and compliance to treatment.

STATE OF ART IN THE INTENSITY MODULATED RADIOTHERAPY OF THE ESOPHAGEAL CANCER

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Introduction: The progress achieved in radioterapy make possible the delivery of an individualized treatment planning. The therapeutic indication is bazed on the tumor board decission. The tumor board includes all factors involved in the diagnosis and treatment delivery for esophageal cancer patients. The TNM classification and the guidelines proposed by the radiation oncology societies (ASTRO, ESTRO, DEGRO) are considered for the indication of radiotherapy in the treatment of the esophageal cancer patients. The consequences of the location of the esophageal cancer in the extrathoracal or upper, middle or lower intrathoracal part on the target volume delineation will be presented. The nutrition status monitoring is one of the most important activities to make possible the optimal treatment delivery and improvement of the patients compliance.

Materials and methods: The esophageal cancer patients treated with preoperative neoadjuvant treatment, definitive radiochemotherapy or adjuvant radiochemotherapy were analysed. The radiotherapy planning procedure is based on the CT performed in the treatment position using an individualized applicated head/neck/shoulder mask. CT

slices at every 2 mm through the whole head and neck, thorax and upper abdomen make possible the precise target volume and organs at risk (the lung, the spinal cord, the myocard or liver) deliniation.

Results: The delineation of the target volumes is bazed on all the data obtained through the biopsy, surgery and the imaging procedures on each patient. The CTV (clinical target volume – microscopic disease) and GTV (macroscopic disease) as well as the PTV (planning target volume) are considered based on the available guidelines. Organs at risk protection based on the guidelines recommendations is mandatory. The final planning is analized and all recommandations concerning the high dose delivery to the GTV, CTV as well as the maximum tolerance dose accepted at the different organs at risk are considered. We are using the VMAT (volume modulated arc therapy) the most modern intensity modulated radiotherapy technique. The daily treatment delivery is controled by using the portal imaging and the cone beam procedure. Large total dose 70 Gy/2 Gy or 66 Gy/2,3 Gy as concomitant boost with 1,8 Gy in 29 fractions should be applied on the primary tumor. The neoadjuvant radiochemotherapy was delivered till a total dose of 50 Gy in 2 Gy fractions.

Conclusions: The use of the IMRT radiotherapy and specially of the VMAT method make possible the delivery of a high quality of individualized treatment. High tumor control rates and less side effects through the protection of the organs at risk as the is thus possible. For definitive radiochemotherapy treatment the delivery of a high total dose on the tumor site as high as 70 Gy in daily fractions of 1,8 or 2,0 Gy is possible. The introduction of the supportive care to monitore the nutrition status of the patient before, during and after the combined treatment is mandatory.

ESOPHAGEAL CANCER. A RETROSPECTIVE STUDY FROM THE INSTITUTE OF ONCOLOGY PROF. DR. I. CHIRICUŢĂ.

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Esophageal cancer is the 6th most common malignancy in the world. The optimal diagnostic and therapeutic approach of this common cancer is still debated. PET-CT along with esophageal ultrasound are the best diagnostic tests, although the role of MRI needs to be clarified. In locally or regionally advanced esophageal cancer the combined modality approach (chemoradiation followed by surgery) yields the best results, although for complete responders who refuse surgery one might adopt follow-up. The dose of radiotherapy which yields a high rate of complete responses, while keeping the complication rate low is a matter of discussion too. With this retrospective study from the Institute of Oncology Prof. Dr. I. Chiricuţă we aimed to audit the current results with the standard treatment in esophageal cancer.

STRATEGIES OF NUTRITIONAL SUPPORT FOR THE ESOPHAGEAL CANCER PATIENT

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Background: The rate of malnutrition in esophageal cancer patient is 78,9%. Weight loss starts before diagnostic and often continues during treatment.

Methods: This paper discusses the causes of malnutrition in esophageal cancer patients and what strategies can be employed in order to help the patient meet his nutritional needs.

Results: Patients with esophageal cancer fail to maintain their weight due to several symptoms associated with the localized and systemic effects of the tumor and also due to the adverse effects following the treatment. Nutritional support, as part of the multimodal treatment of the oncological patient, should begin at the time of diagnostic and continue throughout the treatment period. The strategies for nutritional support include diet modification, oral nutritional supplements, enteral and parenteral nutrition.

Conclusions: Early intervention and consistent follow-up all during the course of the treatment can help the patient maintain or improve his nutritional status, quality of life and possibly, the clinical outcome.

TESTING NEW BIOHIBRID STRUCTURES FOR THERAPEUTIC POTENTIAL IN ONCOLOGY AND REGENERATIVE MEDICINE

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Background: The increased interest in tissue and organ repair is justified by the serious problems that occur in oncoplastic surgery and in reconstructive surgery performed in areas affected by radiotherapy. The highly multidisciplinary field of Tissue engineering and regenerative medicine (TERM) is focused on the development of alternative therapies for tissue/organ repair. Based on integrative approaches using scaffolds, different cell populations, growth factors and other techniques, its overall objective is to induce the formation of new functional tissues.

Biocompatibility improvement of the implantable products (scaffolds) is a cutting edge research subject. Stem cells have emerged as important players in the generation and maintenance of many tissues.

Aims.: The aims of the present study were: 1. Ensuring reproducible techniques for isolation, cultivation and characterisation of murine and human mesenchimal stem cells (MSCs); 2. Establishment and implementation of techniques for differentiation of MSCs toward various cell lineages; 3. In vitro testing of the biocompatibility of new bio-hybrid structures consisting in locally produced titanium scaffolds and stem cells.

Materials and methods: Adult stem cells were isolated from CD1 mouse bone marrow and dental follicle fragments. They were cultivated in specific media and characterised by immunocitochemistry (ICC) using stem specific markers. Differentiation of stem cells was induced toward multiple lineages: osteoblastic (osteoinductive medium), endothelial (fibrin substrate and medium without serum for endothelial cells) and neuronal (collagen and laminin substrate, neuronal specific medium). Titanium scaffolds were obtained by an original method in the Technical University Cluj-Napoca. Their biocompatibility was addressed using cell adhesion assay and proliferation assay (with the plate reader BioTek Synergy 2) as well as ICC (microscopic examination of cells marked with phalloidin-TRITC and DAPI). Statistic analysis was done with GraphPad Prism5, using Dunnett's MUltiple Comparison Test. Cell counting was performed using the morphometry analysis program Axiovision Rel 4.6.

Results: The cells derived from mouse bone marrow and dental follicle adopted typical morphological changes and were positive for markers of stemness and (Oct3/4, Nanog, CD29, CD49) and pluripotency (SSEA-1 and Sox-2). By using specific media, the murine stem cells differentiated toward osteoblasts, endothelial and neuronal cells. The human dental follicle cells differentiated toward bone lineage and became positive for osteocalcin, osteonestin and osteopontin (osteoblast specific markers). Alkaline Phosphatase was intense positive and calcium crystals formed in the culture. the morphological changes, cellular adhesion and proliferation After seeding the stem cells on titanium scaffolds they showed an xcellent biocompatibility.

Conclusions: The cells isolated from the mouse bone marrow and human dental follicle exhibit a stem cell phenotype. The protocols used for their isolation, cultivation and characterisation are effective, as well as the protocols for differentiation toward various cell lineages. Their biocompatibility on new titanium scaffolds is excellent, even better than that of the previously tested osteoblasts.

16/10/2015

MEDICAL ONCOLOGY (I)

CHANGING LANDSCAPE IN THE METHODOLOGY OF THE CLINICAL TRIALS IN THE ERA OF TARGETED AND IMMUNE THERAPY OF CANCER

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NSCLC MANAGEMENT 2015: AN UPDATE

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Lung cancer causes more deaths than colorectal, breast and prostate cancers combined and is the most common cancer worldwide, accounting for 1.8 million new cases and 1.6 million deaths in 2012. An estimated 158,040 Americans are expected to die from lung cancer in 2015, accounting for approximately 27% of all cancer deaths. The most significant results in 2015 regarding the treatment of lung cancer have been the validation of the use of second/third generation of tyrosine kinase inhibitors (TKIs) in advanced lung tumors harboring epidermal growth factor (EGFR) mutations or anaplastic lymphoma kinase (ALK) translocations and the validation of new immunotherapy agents. One of the most significant progresses in the treatment of lung cancer over the last decade has been the description of a distinct population of patients with advanced cancer of the lung with specific EGFR mutations that responds favorably to targeted agents directed against these mutations. Several phase 3 studies (IPASS, EURTAC, NEJ002, WJTOG, First Signal, Optimal) demonstrated an improvement in the progression free survival (PFS) of approximately 4 months in patients with EGFR-mutated advanced adenocarcinoma of the lung that received TKIs like gefitinib, erlotinib or afatinib. The benefit in terms of overall survival (OS) of using these agents has not been as clear. Unfortunately, the majority of patients with EGFR-mutated advanced adenocarcinoma of the lung progress after a variable period of responding to TKIs. The most common mechanism of resistance

is the development of a clone that expresses a T790M mutation that is no longer sensitive to the classical TKIs. AZD9291 and CO1656 (rociletinib) are two new agents active against the T790M mutation and if a biopsy proven mutation is found they should be used. In the presence of oligometastatic disease progression only, the classical TKIs can be continued. There is no role in continuing TKIs in combination with chemotherapy after frank progression when chemotherapy is started. Same principle of rebiopsy applies also after the progression on ALK inhibitors before using second generation ALK inhibitors. It has been recently found that lung tumours can evade immune surveillance by expressing molecules that maintain tolerance, including the interaction of the tumor-associated programmed cell death 1 ligand 1 (PD-L1) with the immune receptor programmed cell death 1 (PD-1). The PD-1–PD-L1 interaction inhibits CD8+ cytotoxic T lymphocyte proliferation, survival and effector function, and can induce apoptosis of tumor-infiltrating T cells. The use of antibodies targeting the PD-1–PD-L1 checkpoint has resulted in some marked responses in early-stage clinical trials for a large panel of therapy-refractory cancer subtypes, including advanced non-small cell lung cancer (NSCLC). Recently there have been two positive randomized phase III trials reported for nivolumab (a PD-1 inhibitor) in patients with stage IIIB/IV in both squamous and non-squamous NSCLC. Currently, in USA, nivolumab is replacing docetaxel for the second line treatment of advanced squamous cell cancer of the lung. Nivolumab is not yet approved for the same indication in advanced non-squamous NSCLC. At ASCO 2015 there was also a preliminary safety and efficacy results on the use of pembrolizumab (a PD-L1 inhibitor) in advanced small cell lung cancer. 35% (7/20) of the patients receiving pembrolizumab had a partial response.

CURRENT STATUS AND FURTHER PERSPECTIVES IN SQUAMOUS CELL NSCLC

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During the last decade improvement in patients' outcome have been recorded in advanced stages of NSCLC. However prolongation of overall survival was noted in the non-squamous cell histology, while for squamous cell subtype the progress look trivial. New chemotherapy agents, nab-paclitaxel and nedaplatin, do not seem to provide clinically meaningful advantages over the classical compounds. The anti EGFR monoclonal antibodies associated to the platinum doublet produce some benefit, but unfortunately no predictive biomarker was identified in order to permit for a more accurate patient selection. Some improvements was noticed in second line setting by using afatinib, a second gneneration TKI, and by the addition of an antiangiogenic agent,ramucirumab, to docetaxel. However, the most significant results came out from the trials evaluating the check points inhibitors, nivolumab and pembrolizumab, which proved to be unprecedentedly active, even in the heavily pretreated patient population. Oncogenic driving mutations have been identified for squamous cell histology following a comprehensive and coordinated effort devoted to the elaboration of the Cancer Genome Atlas (TCGA). Molecular targeted agents directed to some specific oncogenic driving mutations are evaluated at present in second line setting in the large Master Lung-1 randomized trial.

CURRENT AND FUTURE THERAPY FOR MESOTHELIOMA

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Malignant mesothelioma is an incurable disease associated with asbestos exposure arising in the pleural cavity and less frequently in the peritoneal cavity. Platinum-based combination chemotherapy with pemetrexed is the established standard of care. Multimodality approaches including surgery and radiotherapy are being investigated. There is currently no defined standard for second-line therapy. Increasing knowledge about the molecular characteristics of mesothelioma had led to the identification of novel potential targets for systemic therapy. Current evidence suggests pathways activated in response to merlin deficiency, including Pi3K/mTOR and the focal adhesion kinase, as well as immunotherapeutic approaches to be most promising. A two-armed phase II/III trial compared the standard of care cisplatin and pemetrexed regimen with or without bevacizumab as first-line treatment and maintenance in inoperable mesothelioma patients. While tolerance was good, the preliminary analysis of the study revealed that disease control at 6 months favored the bevacizumab arm (73.5% and 43.2%, P = 0·010).Based on early results in nonsmall-cell lung cancer and other solid tumors, it appears likely that immune checkpoint inhibitors will find a place in the therapy of mesothelioma.

16/10/2015

MEDICAL ONCOLOGY (II)

SMALLCELL LUNG CANCER-PROMISES AND PITFALLS IN 2015

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Smallcell lung cancer (SCLC) is an aggressive neuroendocrine malignancy characterized by a short doublingtime, highgrowth fraction, andearly development of wide spread metastases

Although a chemotherapy-andradiation-sensitivedisease (>80% response rate), SCLC typically recurs rapidly after primary treatment, with only 6% of patients surviving 5 years from diagnosis. This disease has been notable for the absence of major improvements in its treatment. Newly diagnosed patients with disease limited tooneregion of the chest typically receiver adiation therapy with cisplatin/ carboplatinandetoposide, while those with more extensive disease receive chemotherapy alone. In most patients, the tumors initially shrink markedly but start growing again in 4–6 months.The only aproved agent in relapse disease remains topotecan. The strongest predictor of outcome for patients with relapsed SCLC is the duration of remission. Genomic characterisation of SCLC is mostly complete and has been characterzed by frequent inactivating mutations in the critical tumor supressor genes TP53 (75%) but no obvious onco gene activated! New genes being explored in p53/Rb double knockout mouse model. Comprehensive genomic analysis identifies SOX2 as frequently amplified gene in SCLC.The researchers found that PARP1, an enzyme involved in DNA repair, was expressed at high levels in small cell lung cancer cells, these high levels may be related to the loss of RB1 and TP53. PD-1 expression is associated with increase survival and the new anti PD-1 drugs (pembrolizumab, nivolumab) has verry promissing results.

We are finally approaching SCLC in a translational manner rather than empirically. Subgroups of SCLC posibly exists that may be targeted by specific therapies. Larger prospective randomised studies are needet to determine the optimal treatment regimen for metastatic SCLC.

MALIGNANT PLEURAL MESOTHELIOMA-OVERVIEW OF THE LITERATURE AND 15 YEARS EXPERIENCE OF "PROF DR ION CHIRICUTA" INSTITUTE OF ONCOLOGY CLUJ-NAPOCA

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Malignant pleural mesothelioma (MPM) is a relatively rare disease, with a slight tendency of increasing incidence especially in males. Occupational exposure to asbestos accounts for almost 80% of cases, occurring decades after (30-50 years after), but there are no recommended screening programs of persons exposed. Patients often present with symptoms like dyspnea due to pleural effusion and chest pain. For initial evaluation and definitive diagnosis, recommendations are to perform a CT scan of the thorax with contrast, thoracocentesis with cytology of pleural effusion and most importantly, a pleural biopsy preferably through thoracoscopy. Possible treatment options include surgery (for diagnostic, palliation or curative purposes), radiotherapy (palliative or after surgery) and chemotherapy with first line Pemetrexed plus a platinum salt (Cisplatin or Carboplatin). There is no standard second line chemotherapy and targeted molecular treatment (bevacizumab, sunitinib) did not show significant improvements over standard treatment. Median overall survival is approximately 1 year and cure is rare. The purpose of this paper is to present an overview of the current literature and to analyze the experience of "Prof Dr Ion Chiricuta" Institute of Oncology regarding the patients treated for MPM. Patients addressed to and treated for MPM in the last 15 years in our institute will be analyzed, in order to compare the diagnostic and treatment strategies to existing standards and their outcomes to those described in the literature.

NEUROENDOCRIN TUMORS OF THE THORAX

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Neuroendocrine tumors represent a various category of malignancies. Despite the fact that they are known to have a low incidence, the latest decades showed an increased number of new cases. Natural history of these tumors depend on degree of diferentation. The latest hystological classification try to identify subtypes with a particular feature, have as main criteria based on mitotic rate. Increasing number of cases with TNE could be explained by increasing and performance of new methods of diagnostics (hystologic and imagistic).

Treatment of TNE should be multidisciplinary. Surgery represent a chance of cure for stage limited disease, but

frequently a relapse will occur during follow up period. As a particularity these relapses could be at a distance from primary treatment, that is why a prolongue periode for surveillance up to 15 years is now recommended. For more advanced disease classic chemotherapy remains modest as efficacy. Target therapy are reported to have superior rate of response but the patients series are small and non conclusive.

For the TNE treatment progress are small and more efforts need to be done in the future.

DRUG INTERACTIONS IN THE THERAPY OF LUNG CANCER

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Background:

The drugs used in the treatment of lung cancer can be metabolized by cytochrome P450, transported by glycoprotein P or interacting with multiple classes of drugs by pharmacokinetic or pharmacodynamic mechanisms. These interactions can influence the treatment and they must be identified and resolved at the beginning of the therapy.

Methods: The product information chart of every cytostatic drug involved in chemotherapy protocols was analysed and all types of interactions were documented. There were enzymatic induction and/or inhibition processes, pharmacokinetic or pharmacodynamic interactions. Cytostatic drugs, supportive drugs and also chronic treatment of the patient were included in the interaction chart.

Results: Most of the interactions regard enzymatic induction/inhibition which affect the drug concentration. Their effect can decrease the compliance of the patient, can influence the outcome of the treatment and even cause serious life threatening adverse reactions. The patient's chronic treatment is often forgotten and lots of drug classes can cause interactions: antidepressant, antiarrhythmic, antibiotic, antiulcer, supplements which can determine the inefficacity of the treatment.

Conclusions: Every patient must be asked about his/hers chronic medication and every possible drug interaction must be evaluated ta the beginning of chemotherapy. The treatment should be adjusted or modified in order to obtain the desired therapeutic response.

NONHODGKIN LYMPHOMA DIFFUSE LARGE B CELL CD20 + . DIFFICULTIES IN THERAPEUTIC MANAGEMENT

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Primary mediastinal large B-cell lymphoma (PMBCL)) was first described in the 1980s and is a diffuse large B-cell non-Hodgkin lymphoma that arises in the thymus.

PMBCL affects young adults in their third to fourth decade of life and has a slight female predominance.

It accounts for 5-7% of all aggressive lymphomas and 2-3% of all non-Hodgkin lymphomasa and represents a distinct entity with unique clinicopathologic features and a molecular gene-expression,signature reminiscent of nodular sclerosis subtype of classical Hodgkin's lymphoma. Recent studies, including those using a refined molecular signature, suggest that the outcome is more favorable than that of diffuse large B-cell lymphoma. In the medical literature, cure rates for this disease range from 38-88%

PMBL is defined by a rapidly growing dominant mediastinal mass, frequently accompanied by local invasiveness and superior vena cava syndrome; involvement outside of the thorax at initial presentation is infrequent and virtually never includes bone marrow.

We report the case of a 32 years old woman detected with PMBCL during pregnancy with severe mediastinal compression syndrome, important/severe thrombotic complications whose therapeutic manangement at diagnosis and in evolution was difficult. Survival to 7 years was due to multidisciplinary collaboration.

Key words: PMBCL, Pregnancy, Therapeutic management

16/10/2015

POSTER A

METFORMIN ASSOCIATED WITH PHOTODYNAMIC THERAPY – A NOVEL ONCOLOGICAL DIRECTION AGAINST MELANOMA

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Background: Metastatic melanoma is the most harmful type of skin cancer due to its advanced capacity of extension and metastasis. Despite the existing therapies in treating melanoma and the latest advances of immunotherapy, the therapeutic response is not always complete and uniform among the patients. Recent data revealed that photodynamic therapy (PDT) unveils encouraging results on in vitro and in vivo experimental models, while some clinical reports suggest a possible role in the management of advanced melanoma. Also, recent data propose Metformin, the most prescribed oral antidiabetic drug, as an effective adjuvant against cancer.

Our in vitro study exploits for the first time the antitumor effects of the combined regimen of Gallium phthalocyanine-mediated PDT (Gal-PDT) and Metformin on a melanoma model.

Materials and methods: Our study was performed on a melanoma metastatic line (M1-15) and it was divided in 6 work groups, as following: 1) control, untreated melanoma cells; 2) irradiated melanoma cells; 3) Gal; 4) Gal-PDT; 5) Metf + Gal and 6) Metf + Gal-PDT. Following the different exposure regimens, cells were washed, further incubated for 24hrs with medium and tested afterwards for viability (MTS method); oxidative stress induction (malondialdehyde, MDA-spectrophotometry); angiogenesis (vascular endothelial growth factor, VEGF-ELISA; Hypoxia-inducible factor 1-alpha, HIF1α-Western Blot); inflammation (tumor necrosis factor alpha, TNFα-ELISA) and also melanin levels by spectrophotometry.

Results: Increased MDA levels were linked to increased tumoricidal ROS activity following irradiation when compared to controls ($p<0.005$). TNF-α levels were low in the M1-15 melanoma cells subjected to Metf + Gal-PDT regimen, versus control ($p<0.005$) strengthening the intricate role of this inflammatory molecule. These findings were consistent with a decreased expression of angiogenesis and melanin synthesis when Metformin and PDT were associated, compared to controls ($p<0.005$).

Conclusion: Our results reveal that Gallium phthalocyanine-mediated PDT, when associated with Metformin as an antineoplastic adjuvant, may be a promising therapeutic strategy in advanced melanoma.

ANTINEOPLASTIC EFFECTS OF METFORMIN ENHANCE ANTITUMORAL EFFECT OF PHTALOCYANINE-MEDIATED PHOTODYNAMIC THERAPY AGAINST MALIGNANT MELANOMA

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Introduction: Metastatic and extension particularities make of melanoma the deadliest type of skin cancer. In spite of the promising therapies that have emerged with the advent of checkpoint inhibitors, the therapeutic response is far from being uniform among the patients or even complete, when it comes to the individual patient. In this setting, photodynamic therapy (PDT) is a niche therapy which has recently entered the field of Oncology unveiling encouraging results on both in vitro and in vivo experimental models. Moreover, there are already a few clinical reports suggesting a possible role for PDT in the management of advanced melanoma. Metformin, the most prescribed oral antidiabetic drug, is in a similar situation, as recent data propose it as an effective adjuvant against cancer. Therefore, our in vitro study is the first to assess the antitumor effects of the combined regimen of Gallium phthalocyanine-mediated PDT (Gal-PDT) and Metformin on a melanoma model.

Materials and methods: Our experimental design was based on radial growth phase melanoma cell line WM-35 and included 6 groups, as following: group 1 (control) contains the melanoma cells; group 2 (control+IR) and group 4 (Gal+IR), where Gallium was added, were irradiated 48h later; group 3 (Gal) contains only Gallium and in group 5 (Metf+Gal) Metformin was added; group 6 (Metf+Gal+IR) represents the associated regimen, which was irradiated 48h later. 72h after, cells were analyzed for viability and were performed: oxidative stress quantification (malondialdehyde-MDA, superoxide dismutase-SOD), inflammation expression (Tumor necrosis factor Alpha-TNF-α; Nuclear factor kappa B-NFκB) and apoptosis quantification (flow citometry and TNF-related apoptosis-inducing ligand-TRAIL).

Results: MDA levels were increased where irradiation was performed, compared to the control group ($p<0.005$). In addition were found low levels of SOD, versus control, leading to the assumption that the associated regimen inhibits the protumoral effects of SOD. The expression of TNF was increased with concomitant high levels of TRAIL, versus control, $p<0.005$, revealing that the association of Metformin with Gallium-PDT induces an efficient pro-apoptotic pathway. Also, a high apoptotic index was confirmed with FACS.

Conclusion: Our results show that Gallium phthalocyanine-mediated PDT combined with Metformin as an antineoplastic adjuvant, may be seen as an encouraging therapeutic approach in advanced melanoma.

LIPOSARCOM DE COAPSA – ABORDAREA RADIOTERAPEUTICA POSTCHIRURGICALA PRIN TEHNICA IMRT

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Pacienta de 74 de ani diagnosticata cu liposarcom de coapsa dreapta pentru care s-a practicat rezectia chirurgicala incompleta din cauza invaziei pachetului vasculo-nervos femural. Examenul IRM a evidentiat prezenta unei formatiuni expansive cu dimensiuni de aproximativ 131mm cranio-caudal, 66 mm transversal, 71 mm antero-posterior pe topografia coapsei drepte, portiunea mijlocie si interna. Examenul anatomo-patologic stabileste diagnosticul de liposarcom pleomorf cu grad histologic 2 (clasificarea FNCLCC). Data fiind varsta si comorbiditatiile asociate (ICC clasa III NYHA, HTAE stadiul II, Obezitate grad II) s-a decis neefectuarea chimioterapiei adjuvante. Ulterior a fost directionata spre clinica de radioterapie, unde a efectuat iradiere post-operatorie in doza totala de 66Gy/33 fractii/ PTV-T prin tehnica IMRT.

A RARE TUMOR – PRIMARY LEIOMYOSARCOMA OF PULMONARY ARTERY. CASE PRESENTATION

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Abstract: Primary leiomyosarcoma of the pulmonary artery is an extremely rare tumor and its diagnosis is very difficult. We present the case of a 63-year-old male patient, previously smoker, with previous pulmonary tuberculosis, diagnosed in 2014 with leiomyosarcoma of pulmonary artery. Surgery (right and left arteriotomy and bilateral extended endarterectomy) was performed in September 2014 and histological examination of the resected mass consistent with leiomyosarcoma. Adjuvant chemotherapy October 2014, 4 courses was also, administrated; chemotherapy was interrupted because of tuberculosis reactivation. Seven months later, the patient developed distant brain metastases for which performed external beam radiotherapy in 2015, in "whole brain" technique. The radiation dose was incomplete because of neurological performance status decreasing.

Leiomyosarcoma of the pulmonary artery is a rare tumor of the lung and its diagnosis is very difficult because the non-specific symptoms which are often misinterpreted as being related to pulmonary thromboembolism.

The literature is reviewed and we discuss the diagnosis option treatment and prognosis.

Key words: primary pulmonary artery, leiomyosarcoma, treatment

16/10/2015

POSTER B

STUDIU DE CAZ: INTEGRAREA SCINTIGRAFIEI OSOASE IN DIAGNOSTICUL IMAGISTIC AL LIMFOMULUI LIMFOPLASMOCITAR

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Introducere: Limfomul limfoplasmocitar este un limfom cu celule B mature, relativ rar, ce implica in mod tipic maduva osoasa si care este constituit din celule ce variaza de la limfocite B mici, la celule limfoplasmocitoide si celule plasmatice. In aceasta lucrarea, prezentam un caz de limfom limfoplasmocitar sacrat, la o pacienta in varsta de 71 ani, fara antecedente oncologie si dovezi ale existentei unei patologii neoplazice in restul organismului. Studiul de caz de fata vrea sa sublinieze rolul integrarii scintigrafiei

osoase in context imagistic pentru un management optim al pacientului cu patologie neoplazica.

Materiale si metoda: Am folosit o gamma camera echipata cu un colimator cu gauri paralele, de uz general si pentru energii reduse (AXIS, PHILIPS Picker / Marconi, Statele Unite ale Americii). S-au achizitionat imagini ale întregului corp din incidenta anterioara si posterioara, la 2 ore dupa administrarea intravenoasa a 20 mCi 99m Tc-HDP (740 MBq).

Rezultate: Examinarea scintigrafica osoasa "whole-body" a evidentiat prezenta de focare hiperfixante si arii cu fixare redusa a radiotrasorului, sugerand un substrat de tip infiltrativ, cu reactii osteogenice asociate. Tomografia computerizata a evidentiat masa tumorala sacrata, invaziva in corpul iliac stang si canalul vertebral sacrat dar fara prezenta adenopatiilor sau a altor localizari tumorale la distanta. Examenul histopatologic efectuat pe piesa de rezectie chirurgicala a confirmat diagnosticul de limfom limfoplasmocitar

Concluzii: In timp ce metastazele sacrate sunt frecvent intalnite, o diagnosticare dificila poate fi intalnita atunci cand exista o singura formatiune tumorala sacrata si nu exista dovezi ale prezentei unui neoplasm in restul organismului. Familiarizarea cu criteriile imagistice si caracteristicile clinice ale tumorilor osoase maligne este necesara pentru limitarea diagnosticului diferential. Totodata, corelarea metodelor imagistice functional-metabolice (scintigrafia osoasa in cazul de fata) cu metodele imagistice structurale/ anatomice (CT si IRM), este obligatorie, mai ales in cazurile de neoplazii de sorginte hematologica.

THE USE OF THREE-PHASE BONE SCAN IN SOFT-TISSUE NEOPLASMS – CASE REPORT

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Introduction: Myxofibrosarcoma is one of the most common sarcomas in elderly patients, showing a slight male prevalence. Myxofibrosarcoma was firstly described as a myxoid variant of malignant fibrous histiocytoma. The tumor is mainly located in lower and upper extremities and rarely in trunk, neck and feet.

Aim Presentation of a soft-tissue neoplasm case (myxofibrosarcoma), in the process of staging and establishing the best therapeutic management.

Material and methods: A 68 years-old female patient, comes into our department for bone balance expansion of a high grade myxofibrosarcoma (bioptic diagnoses and CT). She describes intense pain on the right buttock with irradiation on the lower limb. On the clinical examination, the right buttock was swollen and firm and at palpation there was a large, firm, stationary mass. We performed a three-phase bone scan – dynamic sequential images for 1minute, 10 minutes and 2 h after the injetion of 740MBq 99mTc-MDP, using a"dual head" gamma camera.

Results and discussions: Three-phase bone scan examination with 99mTc-MDP pointed out perfusion and moderate increased activity of the radiopharmaceutical in the right buttock soft-tissues, with extension to the thigh level, but no suspicious images of osseous metastases. Correlation of the bone scan with morphological data (CT), allowed the identification of increased uptake in soft-tissues as corresponding to the tumor formations. Therefore, the mechanisms of extraosseous uptake of bone-seeking radiopharmaceuticals came to be relatively well explained: hyperemia or blood pool activity, absorption in calcium deposits, attachment on the immature collagen, altered proteins from the necrosis sites etc.

Conclusions: we reported a myxofibrosarcoma case, in which complete tumor resection is the treatment of first choice. However, large size lesions in association with older age can endager the maintenance of limb vitality, vascularity and stability. After surgery, the patient requires long-term follow.

ASPECTUL IMAGISTIC SCINTIGRAFIC IN FIBROMATOZA AGRESIVA DESMOIDA – PREZENTARE DE CAZ

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Introducere: Tumorile desmoide sunt neoplasme de tip fibroblastic cu agresivitate locala diferita. Acestea nu metastazeaza, dar local pot infiltra structurile adiacente si pot provoca diferite grade de morbiditate sau chiar mortalitate. Prezentam un caz a unei paciente de 37 de ani, cu o formatiune subcutanata ferma localizata la nivelul treimii medii a coapsei stangi, cu minima mobilitate, care de 6 luni provoaca o sensibilitate durerosa la mobilizare.

Material si metoda: Am folosit o gamma camera echipata cu un colimator cu gauri paralele, de scop general si pentru energii reduse (AXIS, PHILIPS Picker / Marconi, Statele Unite ale Americii). Achizitiile imagistice anterioare si posterioare ale intregului corp au fost obtinute la 2 ore dupa administrarea intravenoasa a 20 mCi 99m Tc-HDP (740 MBq).

Rezultate: In faza de perfuzie si tisulara scintigrafia cu 99m Tc-HDP a relevat cresterea fluxului regional de sa ge si

distributie neomogena a radioactivitatii localizata in portiunea posterioara a coapsei stangi. Imagistica prin rezonanta magnetica (IRM) a identificat in treimea mijlocie a coapsei stangi o formatiune infiltrativa, multinodulara, adiacenta la vase si nervi, dar fara implicare musculara, cu semnal specific tesutului conjunctiv si o anomalie de semnal al segmentului proximal a diafizei femurului drept. Faza tardiva din cadrul scintigrafiei osoase nu a aratat nici o dovada de acumulare patologica a trasorului la nivelul leziunilii osoase suspecte pe scanarea IRM sau in restul scheletului.

Discutii si concluzii: Rolul tehnicilor de medicina nucleara inca nu a fost clar definit in evaluarea si gestionarea tumorilor de tipul fibromatozei desmoide .

In timp ce istoricul si examenul fizic pot incepe procesul de diagnosticare, utilizarea tehnicilor imagistice de rezonanta magnetica si scintigrafia osoasa cu 99m Tc-HDP, au fost in acest caz de mult ajutor pentru chirurgi in diagnosticul neinvaziv a implicarii musculare si osoase a tumorii.

ROLE OF POSITRON EMISSION TOMOGRAPHY (PET/CT) IN IDENTIFYING UNKNOWN PRIMARY IN PATIENTS WITH LUNG METASTASIS.

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Introduction: Positron emission tomography(PET/CT) is currently increasingly being used to identify an unknown primary (UP).The reported results range from 20 to 90%, hence it is till unclear if PET/CT can be used for initial evaluation of UP. Aim of the study was to determine if success varied according to the site of metastasis at presentation.

Material and Methods: Data of patients who presented with single site of metastasis and underwent the PET/ CT study for the detection of primary were retrospectively analyzed. A total of 50 patients were studied and classified according to metastatic site peripheral lymph nodes(PLN) n=17, lung n=23, bone n=6, liver n=2, peritoneum n=2). A PET/ CT scan was considered positive if it revealed the primary as confirmed by biopsy.

Results: We compared the proportion of positive PET scans according to metastatic site and found a wide variation. It ranged from 86.9% (20/23) for lung, 29.4% (5/17) for PLN (cervical, axillary and inguinal), 67% (4/6) for bone, 50% (1/2) for liver. when comparing results in lung and bone metastasis to the others, the PET scan positive proportion was significantly greater for lung and bone compared to the rest ($p<0.01$).

Conclusions: The success rate for identification of unknown primary is influenced by the site of metastasis. When pts present with metastatic lung or skeletal metastasis chances of successful localization of the primary tumor is very high.

DERMATOFIBROSARCOMA PROTUBERANS

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Background: Dermatofibrosarcoma protuberans is a fibrohistiocytic tumor of intermediate malignancy with agressive localized growth, high recurrence rate, but low metastatic potential. It predominates in the trunk and is unusual in acral locations. Report cases: We present the case of a young female, who shows in October 2014 in Surgery Department of the Institute of Oncology Iasi with tumor at left deltoid and ipsilateral axillary lymphadenopathy. In November 2014, the practice surgery, which consists of tumor ablation in the deltoid region; left axillary lymphadenopathy is inoperable due to vascular relations. Histopathology and immunohistochemistry tests highlights diagnosis of dermatofibrosarcoma protuberans. It was decided in external radiotherapy in the Radiotherapy department of the Emergency Hospital "Sf. Ap. Andrei "Galati an the level of left axillary region, performing patient irradiation dose 50 Gy total in 20 fractions with 250 cGy dose fraction in March 2015 because of its cycle timing. Initiating therapy with Imatinib, but still we are facing with a continuus growth of tumor at both axillary and supraclavicular left as well as the mammary gland on the same side with arm lymphedema. Paraclinic tests highlights the presence of bilateral pleural effusions, which is practicated minimum pleurostomie with pleuracan. At the oncology committee it was decidet continued treatment with Imatinib and left mammary gland biopsy that and perform. During hospitalization patients receive palliative and symptomatic treatment however, the patient at about 1 year after was diagnosticated. Conclusion: We present the case because of the rarity and to discuss option treatment, evolution and literature of date.

Key words: dermatofibrosarcoma, rare tumor.

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DOSIMETRIC COMPARISON AND EVALUATION OF RAPIDARC AND 3D-CRT TECHNIQUES FOR LEFT-SIDED BREAST CANCER

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[1]IRO Iasi

The purpose of this workis to evaluate the feasibility of using a multiple partial volumetric-modulated arcs therapy technique on the left breast ir¬radiation and to assess the dosimetry and treatment efficiency. Ten patients with left-sided breast cancer who had been treated with 3D-CRT technique were selected for this study.The RapidArc technique involves six partial volumetric modulated arcs,each arc consisting of a 50° gantry rotation. The jaw opening on the side near the chest wall is minimized to reduce the exposure to the left lung and the right breast. The prescription was 2.66 Gy daily dose in 16 fractions. The VMAT technique for the left-sided breast cancer patients achieved adequate target dose coverage while maintaining low doses to organs-at-risk, and therefore reduced the potential for induction of second malignancy and side effects. The highly efficient treatment delivery proves beneficial for improving patient throughput, providing patient comfort, and achieving precise treatment.

NEUTROPHIL-TO-LYMPHOCYTE RATIO IS AN INDEPENDENT PROGNOSIS FACTOR IN STAGE IV LUNG ADENOCARCINOMA PATIENTS WITH BRAIN METASTASES

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Background: Brain metastases affect approximately 20%–40% of lung cancer patients during their lifetime. Current research indicates several prognostic factors for lung adenocarcinoma (ADK) patients with brain metastases. However, clinical studies have produced conflicting results. Neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR) and red blood cell distribution width (RDW) have been reported as independent prognosis factors in several types of cancer. In this study, we assessed the association of NLR, PLR and RDW with the prognosis of stage IV lung ADK patients with brain metastases who received standard treatment.

Material and methods: We performed a retrospective analysis of all lung cancer patients treated in the Oncology department of the Regional Oncology Institute, Iaşi, Romania between January 2012 and January 2014. Inclusion criteria: ECOG 1-2, stage IV lung ADK with brain metastasis at the time of diagnosis that underwent surgery and/or radiotherapy for the brain metastasis, followed by systemic treatment with a platinum-based regimen. Data were collected for each patient and analyzed by means of SPSS v.20 software – Cox regression.

Results: 84 patients met the inclusion criteria. Mean age was 58.45±1.42 years. Overall survival (OS) was 264.33±28.8 days. Cox regression analysis indicated that number of metastasis (one vs. multiple), high NLR (>4), extra-cerebral metastatic sites and age negatively impact OS ($p<0.05$). In contrast, sex, localization and size of the brain metastasis, as well as hemoglobin, RDW, PLR and platelets had no impact on OS in this analysis. Patients with a high NLR (>4) had an average OS of 186.3±44.6 days as compared with 292±34.7 days in patients with low NLR at diagnosis.

Conclusions: NLR is an accessible, easy-to-use tool that can be used to better assess prognosis in stage IV ADK patients with brain metastasis. A larger prospective study is needed in order to confirm the results of the present study.

16/10/2015

POSTER C

CONSIDERATIONS ON THE PSYCHOTHERAPEUTIC TREATMENT FOR PATIENTS WITH NEOPLASIA

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Introduction: Amethyst is the first radiotherapy clinic in Romania to include ¬ free of charge ¬ the initial session of psychotherapy and therapeutic activities in the support groups for patients and their families. The mission of Amethyst Centre is to ensure that each patient has access to the highest quality medical and psychological services. The Amethyst vision focuses on multidisciplinary activity that integrates the holistic approach to neoplazic patients, providing them with medical oncology, radiotherapy, CT-scan medical imaging, psychotherapy and nutrition services. The start of psychotherapeutic activity consists of enticing

the patients' desire to live and engaging them in the act of healing, by making them aware of the need for collaboration. The study was conducted on a total of 70 young and adult oncology patients, tracking their progress every week for a year. The breakdown of the first five diagnostics / ICD standard localization is the following:

Lip, oral cavity, pharynx	29.23%
Breast	19.14%
Respiratory and intrathoracic organs	15.95%
Female genitalia	14.29%
Eye, brain and other parts of the CNS	8.87%

Objectives: This paper aims at highlighting how the provision of individual and group psychotherapeutic support and seamless integration of psychology in the concept of multidisciplinarity can help neoplazic patients. Psychotherapy plays an important role in awakening the patients' hope by making them aware of their own resources and (re)connecting them with these resources, as well as strengthening their will to fight the adversities of life.

Methods: The mind-body-soul holistic approach, understanding that the human being operates as a single unit and the social context plays a non-negligible role, ¬ clinical interview, tests and clinical scales, clinical observation, support groups, breathing exercises, and emotion and pain management exercises, Ericksonian hypnosis and relaxation, forgiveness techniques, neurolinguistics techniques, graphic productions (drawings, diaries, etc.), Frankl's narrative method (2010), role playing, occupational therapy.

Results: Awakening hope, optimism, interest in life, reconciliation with oneself and with others, finding/ retrieving love for themselves and for others, gaining patience, developing a positive self-image, reconciliation with the fear of death, spiritual growth, self-knowledge and communication, developing deeper relationships with oneself and with others, discovering and resolving emotional disturbances that predated the illness.

Conclusions: Psychological counselling for neoplazic patients is an integral part of the multidisciplinary care team concept. Within this relationship, mutual respect, trust reflected in both poles of the relationship and the psychologist's empathy are the path towards building a successful collaboration. The patients' own beliefs about the idea of psychotherapy, their attitude, feelings, lifestyle and diet play an important role in the treatment stage. Through a synergistic effect of medical and psychological activities, neoplazic patients discover a new meaning of life and rebuild their lives through a realistic adaptation.

TIME TRENDS AND SURVIVAL RATES OF ORAL CAVITY AND PHARYNGEAL CANCERS BY SITES, IN CLUJ COUNTY

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Introduction: The incidence of oral and pharyngeal cancers (OPC) varies widely across the globe, and is highest in regions where tobacco and alcohol consumption are common. In the past decades, oral cavity decreased and oropharyngeal cancers increased in some developed countries.

Objectives: To investigate incidence time trends (1998-2011) and 5-year relative survival rates (2006-2009) of OPC diagnosed in Cluj County.

Material and methods: Data was collected from the North Western Regional Cancer Registry. OPC diagnosed during 1998-2011 were selected according to codes C00-C14. Time-trends were analyzed using Joinpoint regression. Age-standardized incidence rates by the direct method, using the world standard population, were computed. Annual percent change (APC) was used to quantify the change in incidence rates over time and was calculated using least-squares regression. Rates were considered to increase or decrease if $p<0.05$ and otherwise were considered stable. Survival analyses were performed using Kaplan-Meier curves, for cases diagnosed during 2006-2009 and followed until 31/12/2014. Staging was available for the interval 2006-2011.

Results: A total of 1535 new cases of OPC were reported: 1238 (80.65%) male and 297 (19.35%) female. The mean age at diagnosis was 58.6 in men and 57.4 in women. The most frequent site in both sexes was the lip (17.8% in men, 22.9% in women). 67% of cases in men and 48% in women were stages III and IV. In men, incidence rates for all OPC declined by 15.82% from 1998 to 2000, to increase during 2000-2011 with 4.48% ($p<0.05$). Oropharynx recorded an increasing trend with 5.42% ($p<0.05$), based on the increasing incidence of base of tongue cancers with 13.68% ($p<0.05$). Likewise, for hypopharynx, the incidence increased with 9.68% ($p<0.05$), funneled by the increase in pyriform sinus incidence by 12.87% ($p<0.05$). Lip cancer incidence decreased with 7.29% ($p<0.05$). In women, there was a trend towards an increase in oropharyngeal cancer incidence (5.28%, n.s.). The 5-year relative survival for all sites was 31% in men and 56% in women ($p<0.001$). Lip cancer had the best survival in both sexes (60%). In men, the lowest survival was registered for oropharynx (C10) (7.4%). In women, floor of mouth cancers had the lowest survival rate (30%). Statistically significant differences in survival between men and women were observed in pyriform sinus cancers (28% vs 40%) and nasopharynx (41% vs 77%).

Conclusions: With an overall steady increase in rates of OPC, except for lip, which is declining, the most significant rise was for oropharynx (base of tongue) and hypopharynx (pyriform sinus), suggesting, in the case of oropharynx, the potential impact of HPV infection alongside the traditional risk factors like tobacco and alcohol. These data highlight the

importance of preventive measures initiated at community level against these known risk factors, in order to reduce the burden of OPC cancers.

DOSIMETRIC VERIFICATION OF RAPIDARC TREATMENT PLANS IN PROSTATE CANCER

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Rapid Arc is a treatment technique, in which dose is delivered over a single gantry rotation with variable MLC positions, dose rate and gantry speed. Our purpose was to perform measurements to verify the correctness of doses delivered with the RapidArc technique.

Methods and material: Five treatment plans were generated in the Eclipse version 10 including the RapidArc optimizer prostate cases. The plans were delivered to Arc Check phantom, manufactured by Sun Nuclear. .First, the measured dose distributions were compared with the calculated doses. All plans were then delivered several times to verify consistency of the delivery. Gamma analysis was used to verify the correspondence between dose distributions.

Results: We observed good agreement between measured and calculated doses in most cases with gamma values above 1 in >95% of measured points. The reproducibility of delivery was also very high. Gamma analysis between two consecutive runs of the same delivery plan generally showed gamma values above 1 in none of the measured points, and dose deviation less than 1%.

Conclusion: The delivery of RapidArc beam delivery has been verified to correspond well with calculated dose distributions for a number of different cases. The delivery was very reproducible, and was carried out with high stability of the accelerator performance.

"EARLY DETECTIONS IN POST-THERAPEUTIC RELAPSES IN METASTATIC COLORECTAL CARCINOMA BY FOLLOWING UP SOME BLOOD IMMUNOLOGIC MARKERS"

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Backgrounds: To evaluate the predictive and prognostic value of serum biomarkers as: transthyretin (TRT), alpha-enolaze (NNE), beta 2- microglobuline and BAFF in comparison with clinical parameters for overall survival (OS) among patients with metastatic colorectal cancers (mCRC) treated combination therapy.

Material and methods: 53 patients with metastatic colorectal cancers were included, blood samples were taken at baseline, after 3 weeks and 12 weeks of chemotherapy . The method is an enzyme Immuno Assay Protocol for the determination of this biomarkers is based on a sandwich technique in which antibodies are already adsorbed to the plate capture by commercial kit manufacturer. The procedure begins with serum incubation stage, continue to coupling the antigen – antibody immunoconjugate formed initially represented by antibody detection, which has been linked to the enzyme that degrades the substrate- this reaction generates a color reaction(horseradish peroxidase or alkaline phosphatase). The detection kits will be purchased from specialist manufacturers or may be developed in own laboratory, considering buying the antibody pairs -capture detection + – and purified molecule Standards.

Our results confirm the data from literature. This four markers TRT, alphaenolase, beta2-microglobuline and BAFF were significat in the group of patient with metastatic colorectal carcinoma we studied after one year survival.

RARE GYNECOLOGICAL TUMORS. CLINICIANS' VIEW.

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Objectives: There are several definitions of substantially equivalent rare cancers. Unfortunately all are based on the incidence or prevalence of populations that cover very large geographical area and that is why many aspects of heterogeneity effect are blurring.

From discussions with many clinicians we believe that if a cancer occurs on average at least once a week, it can no longer be considered rare cancer. Thus we might consider in Oncology Institute "Ion Chiricuta" (OIIC) rare cancer a form of cancer that occurs under 50 times a year.

Material and method: From the perspective defined above gynecologic cancers from Electronic Registry of OIIC have been analyzed on 2012-2013.

Results: Anatomically we have three common forms: cervicx 2032 patients, endometrium 724 patients, ovary 521 patients and three rare forms: vulva 69 patients, vagina 14 patients, uterus unspecified and related 13 patients and other unspecified gynecological 23 patients.

If we add histology as a second dimension we have 159 forms from which only 8 are common forms. For the

cervix: neoplasm, malignant 105 patients, squamous cell carcinoma in situ 131 patients, keratinized squamous cell carcinoma 335 patients, squamous cell carcinoma, large cell adenocarcinoma 523 patients; ovary: papillary serous cystadenocarcinoma 117 patients, 122 patients serous cystadenocarcinoma. The remaining of 724 is spread in 151 categories. Globally from this perspective we have 68.3% common forms and 31.7% rare forms.

Conclusions: In Europe all cancers of the cervix are rare (definition of "Rare cancer net" covered under 6/100 000); But for the IOCN clinicians' neoplasms, malignant squamous cell carcinoma in situ, keratinized squamous cell carcinoma, squamous cell carcinoma, large cell, necheratinizant, squamous cell carcinoma are common forms.

The uterus comprises a single category for common clinical assessment as assessments at European level.

Ovary in Europe has only rare cancers but in OIIC there are twoo common forms.

The other forms are rare in Europe and in OIIC clinic evaluation.

The percentage of cases of gynecological cancers rare in clinician's point of view is approximately one in three.

17/10/2015
HEALTH POLICY

HEALTH POLICIES AND CULTURAL ELEMENTS IN ONCOLOGY

Stelian Pop[1]

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Oncologists around the world are on constant pressure to increase quality, transparency and reduce costs. How much of these depend on individual performances, how much on the Health System ? The volume of necessary knowledge is overwhelming. What could we do to offer better value at each level of the System, and safer services for patients? I am trying to identify some of the necessary changes in the culture of medical organizations and the value trails for patients, making everyone more effective and responsible.

RADIOTHERAPY COVERAGE IN ROMANIAN

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ESMO – MESC CRITERIA FOR EVALUATING THE NEW DRUGS

Alexandru Eniu[1]

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THE STATUS OF PEDIATRIC RADIOTEHRAPY IN ROMANIA AND IAEA RECOMMANDATIONS

Dana Michaela Cernea[1]

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The cure rate for children with cancer continues to improve and now approaches 80%. This fact is due to advances in multimodal therapy and supportive care. Improvement in local control include use of surgery, new technologies in radiation therapy and chemotherapy at maximum tolerated dose and minimal toxicity.

In Romania radiotherapy is part of multimodal children cancer treatment in more than one third of patients. We will present the general status of radiation treatment in our country for pediatric patients in the more general context of radiotherapy in Romania. Two departments for complex treatment of childhood cancers are functioning in two National Institutes: one in Bucharest and one in Cluj-Napoca. Radiotherapy as part of multimodal treatment is done mostly in these National Institutes. There are no specialized radiation oncologists in radiotherapy for children except one in Oncology Institute "Prof. Dr. Ion Chiricuta" Cluj-Napoca. A questionnaire to every radiotherapy center was sending in order to have a general idea not only about number and pathology of children treated but also about technique's complexity. The results will be presented.

The recommendations of IAEA (Vienna 2013) for a pediatric radiotherapy program and the minimal requirements of quality will be discus. According to IAEA the most important aspects of such a program are: establish a national referral network that facilitates the referral of children diagnosed with cancers to the most experienced radiotherapy centers; develop

and adhere to local treatment protocols for the most common forms of childhood cancer; specialists in pediatric radiation oncology must have a continuous professional development maintaining their understanding of treatment strategies and results by attending discipline oriented meetings and congresses; interaction and communications with pediatric oncologist, pediatric surgeon, imaging specialists, pathology services and the possibility to obtain a second opinion from a qualified collaborating center; children should be treated in radiotherapy centers with significant experience in this particular area of radiation therapy; training and accreditation of health care providers in their disciplines is required. Special attention must be taken on follow-up, psycho- social support, abandonment and survivorship of patients.

We must improve not only the results of treatments in childhood cancers in our country but also the quality of radiation therapy. In order to attend this goal we must have a national program for pediatric radiotherapy, which must be elaborated with the help of professional organisations.

Key words: pediatric radiotherapy, childhood cancers, quality requirements

MEDISPROF 5 YEARS OF EXPERIENCE IN PRIVATE ONCOLOGY SERVICES

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[1]*Medisprof srl*

Medisprof 5 years of experience in Romanian private oncology services, presentation will cover actual facilities, staff and responsabilities in standard practice. Clinical trials staff and responsabilities, affiliation and results will be presented. Medisprof non profit Association activities in the first 4 years will be also a topic

NATIONAL CANCER PLAN, BETWEEN AMBITION AND REALITY

Irimia C.[1]

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17/10/2015

VARIA

CLINICAL EXPERIENCE WITH PRIMARY NEUROECTODERMAL ADULT BRAIN TUMOR. CASE PRESENTATION AND REVIEW OF THE LITERATURE

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Background: adult primary neuroectodemal tumors of the brain are aggressive tumors with unpredictable outcome. The authors present a review of the literature for this type of rare brain tumor. Material and methods. The authors present two cases comparatively of primitive pneumoectodermal brain tumors of adult patients with same histology but with different clinical evolution. Results: Case 1: male, 43 year old, the first symptom headache followed by memory impairment, concentration difficulties. Primitive PNET tumor was localized in the left frontal lobe (5 cm cystic lesion)Treatment: incomplete surgical removal. The pre radiotherapy work-up showed multiple metastases up to 12 mm. No intramedullary involvement was demonstrated on the MRI. Radiation therapy: concomitant cranium-spinal irradiation 36 GY/2Gy 18 fraction with 24Gy/2Gy/12 fraction for the primary left frontal region and 6 cycles of vincristine (1.4 mg/sqm) administration. During radiation therapy multiple subcutaneous metastases appeared with the same histology. The patient survived only 6 month. Case 2: female, aged 39, rapid onset of symptoms headache, speech disorders, memory impairment ataxia and paralysis. A left sided parietal tumor of 5 cm (MRI: cystic, inhomogeneous contrast enhancing lesions) was surgically incompletely excised with recurrence of the clinical symptoms in 3 weeks. Reoperation was not successful and oncological treatment started with concomitant radiochemotherapy. The radiation therapy was 3D conformal therapy 60Gy/2Gy /30 fractions to the brain concomitantly with 6 cycle of weekly vincristine followed by temozolomide for 24 month. The MRI demonstrated successively shrinkage of the tumor. The patient is alive with a follow-up of 40 month with stable disease on MRI presenting a slight motor weakness of the right hand. Conclusion: The identical histological and clinical profile resulted in 2 different behavior, one with favorable and the other with unfavorable outcome. Aggressive treatment, combined therapy and better knowledge of the prognostic factors will improve the further results.

Key words: primary neuroectodermal tumor of the adult, chemotherapy radiation therapy, follow-up.

ADJUVANT CHEMOTHERAPY IN PANCREATIC ADENOCARCINOMA

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The National Comprehensive Cancer Networkand the European Society for Medical Oncology guidelinesare recommended for all patients who have undergone resection of an exocrine pancreatic cancer (including those with resected T1N0 disease should be offered adjuvant therapy.Adjuvant chemotherapy is considered standard care because it has been shown to improve overall survival, regardless of age, gender and tumor stage. However, not all surgically treated patients receive adjuvant chemotherapy. Methods: All patients who underwent pancreatoduodenectomy for pancreatic cancer between 2010 and 2014 and presented in the oncology department were included. Patients received Gem 1g/m2 d1,8,15 q 22d. Patients deceased within 90 days after surgical treatment (N = 8) were excluded from analysis. Results: In total 57 pancreatic-cancer patients underwent pancreatoduodenectomy only 49 patients received adjuvant therapy. M/F: 27/22patients, mean age: 59y(37-82), TNM stage I/II/III:11/21/7. Pathological exam showed ductal adenocarcinoma at 46patients, 1cystadenocarcinoma, 1adenosquamous carcinoma and 1 carcinoma with giant cells (osteoblastic-like). Furthermore, patients diagnosed in 2010 had a significant lower chance for receiving adjuvant chemotherapy treatment compared to patients diagnosed in 2014 (29% vs 51%) Conclusion: Of the pancreatic cancer patients treated with pancreatoduodenectomy 85% received adjuvant chemotherapy. 29 patients completed 6months of therapy. This percentage increased with time. Younger patients with tumor stage II or III had a higher chance for receiving adjuvant chemotherapy treatment. Median TTP was 11.01months(9.11-12.91). Median OS was 29.85months(20.81-38.89), 28 patients are still alive from which 15patients with progressive disease (locally and metastatic).

EFFICIENCY ASSESSMENT OF GEMCITABINE AND CARBOPLATIN REGIMEN IN PATIENTS WITH UROTHELIAL CARCINOMA.

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Bllader cancer represent a common human malignancy usually affecting patients with several comorbid diseases. Systemic chemotherapy prolongs survival of patients with recurrent disease after cystectomy or initially metastatic or unresectable disease. The long-considered-standard regimen MVAC has been chellenged by combinations with less toxicity profile as gemcitabine-cisplatin. Thus, most of these pacients may not benefit from cisplatin –based regimens due to the renal impairment.The combination of gemcitabine plus carboplatin has proved to be effective as a treatment of patiens with carcinoma of the urothelium.

Methods: In this study 22 patiens with locally advanced or metastatic urothelium cancer were treated using gemcitabine 1000 mg/m(2) on days 1 and 8 and carboplatin (area under the curve 5)on day 1 every 21 days. Median age of patients was 58 .The patiens were evaluated for response rate after six cycles using RECIST criteria.

Results: The treatment was generally well tolerated. The most frequent grade 3-4 hematologic toxicity was neutropenia in 32,3% of patients. The most frequent grad 3-4 nonhematologic toxicity was nausea and vomiting (3,5%). The overall response rate was 59 %.

Conclusion: GC is active in patients with urothelial cancer and has a acceptable toxicity profile.

PROGNOSTIC FACTORS IN PACIENTS WITH BREAST CANCER AND CEREBRAL METASTASES –EXPERIENCE OF ONCOLOGY INSTITUTE "PROF.DR. I. CHIRICUTA"

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Introduction: The development of brain metastases is one of the biggest clinical challenges for patients with breast cancer. Cerebral metastases tend to occur among those who are younger, have larger tumors, and have aggressive histological subtype such as the triple negative (TN) and HER2-positive subtypes. Their incidence is documented between 10%–16% of cases, with a strong negative impact on survival of these patients.

Methods: Patients with breast cancer and cerebral metastases diagnosed and/or treated in our institution between 01.01.2010 and 31.12.2014 were taken into study. Two subgroups were analyzed in detail, the TN and HER2+. The clinical characteristics, pathologic features, treatment and prognostic factors were analyzed. Survival time intervals as initial diagnosis to distant metastases, distant metastases to brain metastases, brain metastases to death, and overall diagnosis to death were calculated.

Results: A total number of 181 patients were identified. Only the TN and the HER2 subpopulations were taken into consideration meaning 98 charts analyzed, with only 78 having sufficient data to be included in the final statistical analysis.

The HER2+ group represented two thirds (2/3) of patients and were 28.8% stage II, 57.7% stage III and 13.5% stage 4.

One third (26 patients) were TN, with 3.85% stage I, 34.6% stage II, 57.7% stage III and 3.85% stage IV.

Thirty one (39.7%) patients had metastatic disease prior to developing brain metastases, most of whom (74.2%) were HER2+. Nine patients lived long enough to develop second brain metastases, a majority (7) of which were HER2+.

Survival curbes showed that TN subgroup had the worst survival after brain metastases.

Conclusions: The prognosis of brain metastases from breast cancer was poor. Patients with distant metastases prior to cerebral metastases were more likely to be HER2+. TN group developed brain metastases sooner and had the worst outcome in terms of survival.

EVALUATING SKIN TOXICITY IN HEAD AND NECK CANCER PATIENTS TREATED WITH IMRT

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Purpose: To evaluate radiotherapy related skin toxicity in head and neck cancer patients undergoing treatment with rotational IMRT technique-VMAT. Materials and Methods: We have included in this study 33 patients with various head and neck cancers. The patients were treated on a 6 MV Linac (Elekta Synergy) with VMAT technique. Immobilization was done with 3 or 5 point thermoplastic masks from CIVCO. At the beginning of the treatment the skin type for each patients was scored using the Fitzpatrick skin type system. We have evaluated and scored skin toxicity weekly according to RTOG and if needed patients were advised to use local treatment with silver-based or hydrating creams. Results: The following skin types were noted: 11 patients type II, 13 patients type III, 9 patients type IV. No patient in the study had grade 3 or 4 skin toxicity at the end of the treatment and no interruption was needed because of skin related events. 17 patients (51%) presented grade 1 reaction with erythema and focal dry descuamation. 16 patients had grade 2 reaction with bright erythema and moist descuamation limited to skin folds.Conclusions: Skin toxicity can cause discomfort to patients and can increase the risk of infections in the irradiated skin, however in our patients we haven't noted any grade 3 or 4 toxicity or skin related infections and we had no interruption. Even with rotational IMRT, where skin toxicity is expected to be higher the reactions were acceptable and healed with no complications.

LONG TERM RESULTS IN GIST TREATMENT – FROM THE LITERATURE TO OUR PRACTICE

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Gastrointestinal stromal tumors (GIST) are rare tumors froma variety of gastrointestinal stoma. They represent 1-3% of all gastrointestinal cancers. Their incidenceis10-20/1 million.

GISTs have previously been documented to be resistant to conventional chemotherapies.KIT-inhibition has emerged as the primary therapeutic modality along with surgery.

Imatinib has produced durable clinical benefit and objective antitumor responses in most patients with GIST. The estimated 9-year OS rate for all pts was 35%.

Sunitinib can induce objective responses and control progressive disease in patients with imatinib-resistant GIST.

Regorafenib demonstrated significant activity in patients with advanced GIST after failure of both imatinib and sunitinib.

In patients with progressive disease no longer receiving benefit from current TKI therapy, re-introduction of previously tolerated and effective TKI therapy can be considered.

According to NCCN guidelines panel, continuation of TKI therapy life-long for palliation of symptoms should be an essential component of best supportive care.

In cooperation with Clinical Institute Fundeni, as a part of a national research programme, inour databasewe recorded 80 patients with GIST, operated between October2001 and June2007.Only16of the patients receivedtreatment with imatinib as long as adjuvant treatment was not reimbursed and even in metastatic setting the reimbursement was difficult too.

The analysis ofour group of patients, draw the following conclusions

- Alarge number of thesewere presentedinadvanced stages, which has madeonly61.25% to be able to practice R0 resection compared with80-85% asareliterature data
- Imatinibwas administered to20.5% of patients that hadindication
- From the 16 patients treated with Imatinib 7 are still alive, 1 of them under Sunitinib therapy and all the others on different dosage of Imatinib.
- The treatment was very well tolerated; none of the patients have to stop the therapy because of toxicity.

BIPHENOTYPIC ACUTE LEUKEMIA AND GRANULOCYTICMEDIASTINAL SARCOMA. AGRESIV CYTOSTATIC TREATMENT AND PERIPHERAL STEM CELL ALLOTRANSPLANT.

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Biphenotypic acute leukemia (BAL) is an uncommon clinical entity. It is a type of acute leukemia with features characteristic of both the myeloid and lymphoid lineages and for this reason is designated as mixed-lineage, hybrid or biphenotypic acute leukemia. The precise incidence among acute leukemia is uncertain, although it is likely to account for approximately less then 5% of all acute leukemia . Probably it arises from a multipotent progenitor cell and carries a poor prognosis. Although there are no uniform criteria about whether to treat these patients as ALL or AML, it is likely that an intensive approach with high-dose therapy followed by bone marrow transplantation will be required to eradicate the disease permanently. The features of 100 mixed-phenotype acute leukemias (MPALs), fulfilling WHO 2008 criteria, are documented. It has been included in the WHO classification of haemopoietic malignancies as acute leukaemia of ambiguous lineage.

Myeloid sarcoma is found in 2%-8% of patients with acute myeloid leukemia (AML). Myeloid sarcoma may develop before or concurrently with AML, or may be the initial manifestation of AML relapse in previously treated patients. Myeloid sarcoma is a rare extramedullary solid tumor consisting of immature myeloid cells and most commonly involving the bone, skin, lymph nodes, soft tissue, gastrointestinal tract and testis. Mediastinal myeloid sarcoma is very rare, may precede leukemic stage for months or years, and which is frequently misdiagnosed, mostly as malignant lymphoma.

We report the case of 21 years old patient/ young woman, diagnosed with cardiac tamponade, mediastinal myeloid sarcoma and acute biphenotypic leukemia that required reduction surgery and aggressive chemotherapy for survival.

Key words: Biphenotypic acute leukemia, mediastinal myeloid sarcoma, complex surgical therapy, chemotherapy.

A CASE OF COMPLETE REGRESSION OF A PROSTATE ADENOCARCINOMA TREATED WITH EBRT (EXTERNAL BEAM RADIOTHERAPY) AND ADT (ANDROGEN DEPRIVATION)

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Introduction: Prostate adenocarcinoma is representing the most frequent malignancy in men (USA). Epidemiologically, Romania is heading in the same direction with the introduction of PSA (prostate specific antigen) screening tests.

Material and method: We are presenting the case of P.M. with prostate adenocarcinoma, 69 y.o. with an old, obstructive and imitative, low urinary symptomatology when presenting in November 2014 to Parhon Hospital Iasi, never treated, with serum PSA values of 19.1 ng/ml.

The prostatic biopsy was showing moderately differentiated (G3) acinar adenocarcinoma (Gleason 6).

In December 2014, PSA values were 28.3 ng/ml, when initiating hormonotherapy with goselerin acetate (LH-RH agonist).

MRI exam (magnetic resonance imaging) in February 2015 was showing an increased prostate volume (38/47/45 mm) with a discreet extra capsular extension and a obturator lymphadenopathy (12/10 mm). Conclusions: T3aN1Mx prostatic cancer.

In February 2015 it started EBRT in TD = 74 Gy/37 fractions/PTV-T and 46 Gy/PTV-N 46 using RapidArc technique.

Control MRI exam in June 2015 was showing a complete regression of the tumour with oedema and median lobe hypertrophy.

Results: According to 2015 NCCN guidelines, T3a and PSA values frame the patient into the high risk category when the recommended therapy is EBRT and ADT (2-3 years) or EBRT with brachytherapy ± ADT(2-3 years). For this case,EBRT and ADT (2-3 years) were chosen.

Conclusions: This is a classic case of prostatic adenocarcinoma by which we wanted to underline 2 major aspects: 1. Complete regression of the tumour under EBRT and ADT and 2. The importance of this malignancy by its incidence and mortality, especially when a specific screening test (PSA) is available and affordable which can diagnose this type of cancer in early stages.

OUR EXPERIENCE REGARDING HYPOFRACTIONATED RADIOTHERAPY IN BREAST CANCER

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Adjuvant hypofractionated radiotherapy in breast cancer has become a therapeutic standard. More and more studies confirm the same results in terms of local control and even better cosmesis, compared to conventional fractionation. We started to use hypofractionated radiotherapy in breast cancer years ago for at least two reasons: an attempt to offer our patients treatments conformal to therapeutic standards, under Romanian conditions and to shorten the waiting lists, known to be outrageous in Romania. Due to the lack of resources, waiting time in radiotherapy is within months, with deleterious consequences on treatment outcome.

We started the protocol in adjuvant setting and extended it to palliative treatments, and the results in our series confirm the literature data.