PEERS ALLEY MEDIA

WHO SHOULD ATTEND

Oncologists | Gynecologists | Gastroenterologists | Breast Surgeons | Surgical Oncologists | Radiologists | Pathologists | Dermatologists | Oral Radiologists | Orthodontist | Ophthalmologists | Osteopathic Physicians | Surgeons | Pulmonologists | Nephrologists | Neurologists | Urogynecologists Geriatricians | Urologists | Rectal surgeons | Proctologists | Orthopaedic Surgeons | Hepatologists | Hematologists | Geneticists

EUROPEAN ONCOLOGY CONFERENCE

MARCH 30-31, 2020 | PARIS, FRANCE

Venue

Mercure Paris Charles De Gaulle Airport & Convention

BP 20248 -Roissypôle Ouest -Route de la commune -95713 Roissy CDG Cedex

2 DAYS WITH MORE THAN 45 SESSIONS, KEYNOTES & TALKS

12+ INNOVATIVE FEATURED SPEAKERS

20+ HOURS OF NETWORKING EVENTS

60+ INTERNATIONAL SPEAKERS

125+ EDUCATIONAL SESSIONS

Welcome Message

Dear participants of Euro Oncology 2020 and colleagues around the World!

Please, receive our warmest greetings from the “Euro Oncology Conference 2020”, the inspiring scientific event to be held during March 30-31, 2020, in Paris, France.

Our theme relates to the “Advancements in Oncology and Cancer Science”, a challenging trending topic in the research field. We all know that cancer is not one disease, it is more than 200 diseases, and most of them are unique and quite different one another. Consequently, the cellular factors (and the external stimuli) that are responsible for different types of cancer constitute a vast research field. New findings are essential for designing new specific approaches related to an efficient prevention and treatment of the disease. The discovery of novel factors associated to cancer development and progression is growing exponentially at the present time. A similar observation is valid for the number of external stimuli and supposedly simple physiologic responses, which could show unsuitable intensity or being extended for inappropriate periods of time. We hope and wish that the most recent discoveries that are going to be discussed in this meeting, which are typically achieved due to collaborative and multi-disciplinary endeavours, will shed new light on our understanding of this significant health and social problem. We expect that all attendees may experience two wonderful and fruitful days in the City of Light. Paris welcomes you all!

Mario D. Galigniana

Professor
University of Buenos Aires
Argentina

WORKSHOP on

"Effects of Far-Infrared & Terahertz Onnetsu Thermotherapy on Various Cancers, Rheumatoid Arthritis and other diseases"

INTRODUCTION: Onnetsu means comfortable heat. Onnetsu Thermotherapy invented by Dr. Kazuko Tatsumura emits from a special patented ceramic; 1) Heat 2) Precise 8-10μ of vibration of Far Infrared SunRay and 3) Vibration of Terahertz.

Dr. Tatsumura is the first in the world to incorporate Terahertz minerals to medical use from active volcanos stones from Japan. Worldwide patent pending.

METHODS: When Onnetsuki is slid over the skin, healthy areas are comfortable, but IF deep tissue is unhealthy or cold, degenerated, patient feels this spot to be 'hot'. When this 'hot spot' is effectively treated with Onnetsu Thermotherapy (Far-Infrared & Terahertz vibrations, and Heat), the hot sensation subsides and the Disease Conditions improve through vibrating water molecules of our deep tissue. Therefore, the Onnetsu Thermotherapy is both a diagnostic and therapeutic.

Dr Kazuko's Onnetsu Thermotherapy is based on four historical and scientific facts.

1. Traditional Japanese Concept of the significance of Body Temperature. Hippocrates also has left quotes on Heat.
2. NASA's finding regarding Far-Infrared vibration from Sun light precise 8-10μ. Also, added is the specific Terahertz vibration of earth minerals from volcanos stones from the depth of our planet earth.
3. Immunology by Dr. Toru Abo, balancing autonomic nervous system to improve condition of white cells; Raising Immunity.
4. Promoting four flows of Energy throughout our body by using acupuncture meridian technique.

RESULT: Some countries (Peru, Cuba & Mexico) are practicing it in the hospitals and clinics. Clinical trials have shown improvements on many diseases: such as asthma, brain, ear & eye problems, cancers, diabetes, rheumatoid arthritis, tuberculosis and various pain conditions. Clinical studies from Cuba and Peru will be presented.

CONCLUSION: Onnetsu Thermotherapy is a new, easy & noninvasive treatment modality to treat difficult chronic medical conditions. Therapy uses Universal Vibrations, Heat, Light, Autonomic Nervous System

Balance and Acupuncture Meridian System.

Dr. Kazuko has taught Onnetsu Thermotherapy to MDs and health practitioners over past decades throughout the world.

Dr. Kazuko Tatsumura

Director, Gaia Holistic Health
USA

WORKSHOP on

Outsmarting Cancer Cells Tactics to Circumvent Intervention: Activation of Apoptosis Pathways of Tumor Technology AAAPT: A Novel Synergistic Approach for Treating Cancer

Introduction: Conventional chemotherapy can kill bulk cancer cells leaving behind cancer stem cells (CSCs) and cancer resistant cells (CRCs). CSCs and CRCs are found to be responsible for high recurrence of disease, metastasis and making cancer cells refractory to future treatments. Tumor cells circumvent host-driven endogenous or therapy-induced death signals by a) deactivating intrinsic/extrinsic cell death pathways (e.g. inactivating death receptor/ligand CD95/CD95L activity), b) activating surviving pathways (e.g. NF-kB inducing anti-apoptotic proteins, PARP). Methods are needed to sensitize CSCs and CRCs to evoke a better response from chemotherapy, particularly for triple negative breast cancer (TNBC) patients. This is because TNBC patients have limited options and anthracyclines or combination of chemotherapeutics (doxorubicin, paclitaxel, cyclophosphamide etc.) are still the front-line treatments, despite high off target toxicity including cardiotoxicity. Scope: Hence, improving chemotherapy efficacy by targeted sensitization of nonresponsive cells (i.e. CSCs and CRCs) to make chemotherapy effective at lower doses (i.e. expanding therapeutic index) is an unmet medical need and is applicable to most cancer treatments.

Results: Sci-Engi-Medco Solutions (SEMCO) invented and patented technology "A priori Activation of Apoptosis Pathways of Tumor" (AAAPT) which is shown to sensitize both CSCs and CRCs to chemotherapy. AAAPT has three platforms; 1. Plant based natural Defensin (Def1) protein, 2. Natural Human Beta Defensin (hBD-1) and Small molecule Vitamin E derivative. The promising preliminary in vitro and in vivo data by AAAPT leading candidates (e.g. AMP-001/002) in TNBC tumor models indicates a) the enhancement of therapeutic indices of current treatments including chemotherapy, radiation and inhibitors, b) lowered IC-50 and ED 50 significantly (5-0 times) and reduced the cardiotoxicity of chemotherapy at neoadjuvant settings with AAAPT.

Conclusions: AAAPT addresses the fundamental aberrations of cancer cells circumventing intervention irrespective of nature of intervention.

Dr. Raghu Pandurangi

Founder, President
Sci-Engi-Medco Solutions Inc.,
USA

PRESENTATION FORUM

KEYNOTE FORUM / MINI-PLENARY SESSIONS

Presentations under Keynote Forum or Mini-Plenary Sessions includes abstracts with remarkable research value selected by the program committee. These significant speeches are delivered by globally recognized honorable speakers and it is open to all registrants.

DISTINGUISHED SPEAKERS FORUM (ORAL ABSTRACT SESSIONS)

In this forum, speakers and experts of the research field gets an opportunity to showcase their noble research work that involves comprehensive research findings. These formal oral presentations include a wide range of talks covering basic research to advanced research findings in accordance to the theme and scientific sessions of the conference.

STUDENT FORUM

POSTER SESSION

This session is particularly introduced to encourage more number of student participation at international conferences, however it is not restricted only to students since it is also available for the participants with language barrier. There are specific guidelines to be followed to prepare the poster. Poster topic should be selected only from relevant scientific sessions with in-depth technical details.

YOUNG INVESTIGATORS FORUM

An exclusive opportunity for students and young investigators to present their research work through a formal oral presentation. Young Investigators Forum provides a global platform for young researchers and scholars to showcase their valuable contribution to the scientific world and to get acknowledged by the global scientific community of experts. It is an excellent opportunity to recognize young scientific assets with promising research ideas. These oral presentations are of shorter time duration with 10-15 minutes of informative and precise presentations in relevant scientific sessions.

TIME TO **CONNECT** WITH YOUR **PEERS**

Register & Participate in

EURO ONCOLOGY 2020

TYPES OF ACADEMIC REGISTRATIONS

SPEAKER REGISTRATION

- COMBO A (Registration + 2 night's accommodation)
- COMBO B (Registration + 3 night's accommodation)
- DELEGATE REGISTRATION

SUBMIT YOUR ABSTRACT CLICK HERE

NO SECRET IS SAFE SHARE YOUR RESEARCH

https://oncology.peersalleyconferences.com/

EDUCATIONAL WORKSHOPS/ RESEARCH WORKSHOPS/CORPORATE WORKSHOPS/MINI- SYMPOSIA

With an aim of transferring knowledge among the participants, workshops are introduced as a part of international conferences. These interactive and occasionally practical sessions gives an opportunity for participants to engage in detail discussion. Workshops are mostly scheduled for 60 to 90-minutes. It may range from learning about a specific topic relevant to international education, products and research which sometimes involves practical demonstration. It helps in enhancing skills, knowledge and understanding of the research field in depth through interactive discussions.

HIGHLIGHTS OF THE DAY SESSIONS

"Highlights of the Day Sessions" is introduced to discuss and focus a ray upon previous day ORAL ABSTRACT presentations by experts to summarise the key findings. It helps in getting better insights into the various dimensions of the topic.

EDUCATIONAL SESSIONS/ TRAINING PROGRAMS

Educational Sessions or training programs are specifically designed for a better understanding of the latest findings and technologies. These are generally 45-minute sessions that gives an exposure to the multidisciplinary field, that provides in-depth learning experiences and address educational needs.

MEET THE PROFESSOR @ NETWORKING SESSIONS

This session involves open discussion between the experts and session attendees, it gives enough time for getting answers to specific questions and doubts. It is an opportunity for attendees to increase their professional networking, sometimes also leads to an excellent collaboration opportunity.

SCIENTIFIC TRACKS/ SESSIONS

Oncology | Pancreatic Cancer | Breast Cancer | Oral and Oropharyngeal Cancer | Eye Cancer | Uterine Cancer | Lung Cancer | Skin Cancer | Kidney Cancer | Bladder Cancer | Prostate Cancer | Colorectal Cancer | Anal Cancer | Cervical Cancer | Bone Cancer | Liver Cancer | Stomach Cancer | Blood Cancer | Brain Cancer | Gastrointestinal Cancer | Ovarian & Testicular Cancer | Cancer research and Cancer vaccines | Cancer Genetics | Treatment of cancer

TYPES OF BUSINESS REGISTRATIONS

SPEAKER REGISTRATION
COMBO A (Registration + 2 night's accommodation)
COMBO B (Registration + 3 night's accommodation)
DELEGATE REGISTRATION

TYPES OF STUDENT REGISTRATIONS

REGISTRATION
YIF
COMBO A (Registration + 2 night's accommodation)
COMBO B (Registration + 3 night's accommodation)
POSTERS

TYPES OF ADDITIONAL REGISTRATIONS

Accompanying Person
E-Poster
Virtual Presentation
Workshops
Start-Ups

SUBMIT YOUR ABSTRACT CLICK HERE

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Concurrent Educational Sessions

MONDAY, MARCH 30, 2020

ONCOLOGY
- Risk factors
- Screening
- Signs & Symptoms
- Diagnosis & staging
- Specialities

PANCREATIC CANCER
- Adenosquamous carcinomas
- Squamous cell carcinomas
- Giant cell carcinomas
- Insulinomas (Insulin)
- Glucagonomas (Glucagon)
- Gastrinomas (Gastrin)
- Somatostatinomas (Somatostatin)
- VIPomas (Vasoactive Intestinal Peptide)

BREAST CANCER
- Inverted nipple
- Nipple discharge
- Discomfort
- Lumps
- Fibroadenoma

ORAL AND OROPHARYNGEAL CANCER
- Mouth Ulcer
- Tobacco use
- Alcohol
- Human papillomavirus (HPV)
- Poor oral hygiene
- Marijuana use
- Poor diet/nutrition

GROUP PHOTO | COFFEE BREAK

EYE CANCER
- Dermoid cysts
- Rhabdomyosarcoma
- Retinoblastoma
- Intraocular tumors
- Choroid tumor
- Iris tumor

UTERINE CANCER
- Pelvic pain
- Vaginal bleeding
- Mass in the vagina
- Metabolic syndrome
- Type-2 diabetes

LUNG CANCER
- Smoking
- secondhand smoke
- Radon
- Asbestos
- Family history of lung cancer

SKIN CANCER
- Expose to ultraviolet radiation
- Tanning beds
- Fluoruorcil
- Kaposi's sarcoma
- Sebaceous carcinomas

LUNCH BREAK

KIDNEY CANCER
- Renal cell cancer
- Transitional cell cancer
- Wilms tumor
- WAGR syndrome
- Renal tubule & renal pelvis

BLADDER CANCER
- Blood in urine
- Transurethral resection
- Urinary diversion
- Cystitis
- Benzidine
- 2-Naphthylamine

PROSTATE CANCER
- Benign prostate hyperplasia
- Gonorrhea
- Prostate-specific Antigen (PSA)
- 5α-reductase inhibitors
- Bisphosphonates

COLORECTAL CANCER
- Inflammatory bowel disease
- Crohn's disease
- Ulcerative colitis
- Colonoscopy
- Sigmoidoscopy
- Aspirin

COFFEE BREAK

ANAL CANCER
- Rectal bleeding
- Sexual activity
- Immunosuppression
- Cloacogenic carcinoma
- Apoptosis
- Anal intraepithelial neoplasia (AIN)

CERVICAL CANCER
- Sexual intercourse
- Birth control pills
- Henrietta Lacks (HeLa)
- Multiple pregnancies
- Oral contraceptives

BONE CANCER
- Fatigue
- Wieght loss
- Osteochondroma
- Osteoblastoma
- Enchondroma
- Ewing's sarcoma

LIVER CANCER
- Mucinous cystic neoplasm
- aflatoxin
- Hepatocellular carcinoma (HCC)
- Cholangiocarcinoma
- Ablation therapy
- Liver transplantation

Concurrent Educational Sessions

TUESDAY, MARCH 31, 2020

STOMACH CANCER

- Helicobacter pyroli
- Mesenchymal tumors
- Constipation
- Blood vomiting
- Dysphagia
- Tropical sprue

BLOOD CANCER

- Ionizing radiation
- Down syndrome
- Acute lymphoblastic leukemia
- Acute myeloid leukemia
- Chronic lymphoblastic leukemia
- Chronic myeloid leukemia

BRAIN CANCER

- Change in mental capacity
- Hallucination
- Brain strokes
- Hemorrhages
- Vasculitis

GASTROINTESTINAL CANCER

- Hoarseness of voice
- Barrette's esophagus
- Esophageal cancer belt
- Caustic substances
- Barium solution
- Tube prosthesis

GROUP PHOTO | COFFEE BREAK

OVARIAN & TESTICULAR CANCER

- Fertility medication
- Menopause
- Sex cor stromal tumors
- Germ cell tumors
- Undescended testis
- Crytochidism

CANCER RESEARCH AND CANCER VACCINES

- Antigem vaccines
- Whole cel vaccines
- Dendritic cell vaccines
- DNA vaccines
- Anti idiotype vaccines

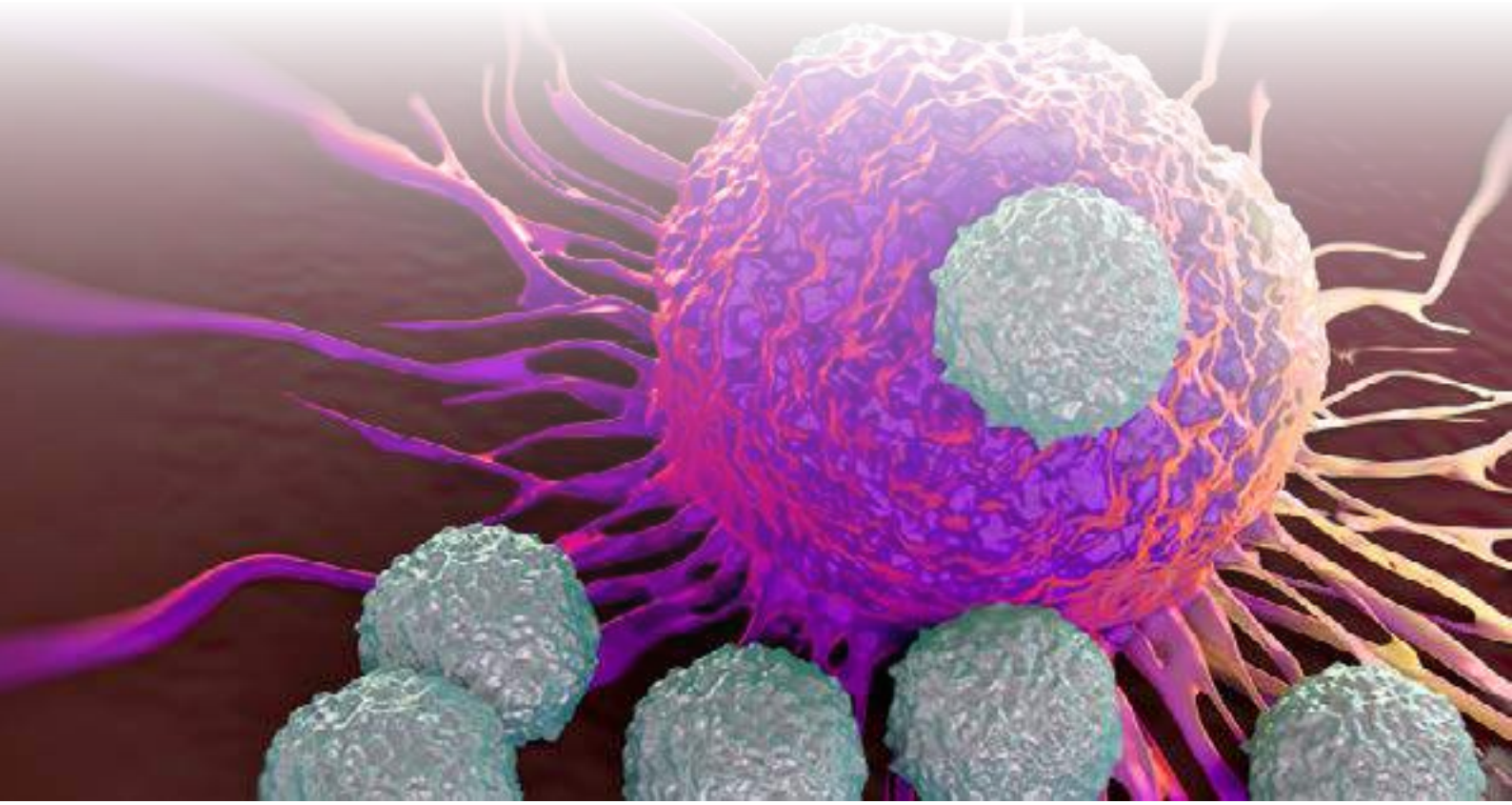
CANCER GENETICS

- Human Genome Project
- Whole genome sequencing
- Operomics
- Oncogenomics
- Point mutations
- Cancer genome sequencing

TREATMENT OF CANCER

- Surgery
- Bone marrow transplantation
- Radiation treatment
- Chemotherapy
- Immunotherapy
- Hormone therapy
- Precision medicine
- Stem cell treatment

LUNCH BREAK



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FEATURED TALKS

PEERS ALLEY MEDIA

Title: Imaging characteristics of HCC Nidus: Retrospective review of contrast enhanced CT and MRI

Beatrice L Madrazo | **University of Miami/Miller School of Medicine, USA**

ABSTRACT: To describe specific imaging findings of early (<20 mm) hepatocellular carcinoma (HCC), their frequency using triple phase CT and MRI; to determine their site of greatest prevalence according to hepatic segments, their enhancing patterns and relationship to the hepatic vascular structures.

METHOD AND MATERIALS: Retrospectively, we reviewed a total of 212 patients: we included 56 patients that met the criteria of having an imaging study with a perceptible HCC <20 mm, two or more follow-up studies, and non-treated lesions (embolization or radiofrequency ablation). The following findings were recorded: focal parenchymal changes, liver capsule bulging, unpaired hepatic artery, increased vascularity, and fat deposition. We also documented the hepatic segment involved, arterial enhancement, portal-venous washout and capsule perception on delayed phase. For the statistical analysis, we used generalized estimating equation method to take account of correlation among measurements within a patient. Our main outcome is perceptible HCC tumor size <20 mm as a binary outcome assuming autoregressive correlation structure with lag 1 (AR). P-value less than 0.05 was considered statistical significance.

RESULTS: The 56 patients included 36 males (64.3%) and 20 females (35.7%) with a mean age of 58.4 years. Of the total 138 imaging studies reviewed the mean diameter of early HCC lesions was 14.2mm (SD=3.9). Most lesions were identified in segment VIII (24.6%). Only lesions proximal to the portal vein were statistically significant in the uni-variable analysis. Lesions in proximity to the portal vein were more likely to be larger than 20 mm in comparison to the lesions remote to this vessel (OR=2.82; 95%CI(1.29, 6.18); p-value=0.01). However, no statistical significance was found between lesions proximal and distant to the hepatic vein (p=0.159).

CONCLUSION: The need to recognize the earliest imaging findings of an evolving HCC is paramount for patient management. This retrospective review indicates a higher prevalence of lesions in segment 8. Specific risk factors of our data analysis indicates proximity to portal veins as conducive to the evolution of an HCC

FEATURED TALKS

PEERS ALLEY MEDIA

Title: Analyzing drug-induced mitochondrial dysfunction in cancer cell lines

Matthew J Young | **SIU School of Medicine, Carbondale, IL, U.S.A.**

Abstract: One goal of our laboratory is to understand the off-target effects of drugs on mitochondrial functions. Using human cancer-derived cell lines as model systems, we have treated cells with acetaminophen (APAP), the biguanide metformin, or the nucleoside reverse transcriptase inhibitor (NRTI) dideoxycytidine (ddC). Firstly, to study the effects of APAP and metformin on mitochondrial function the HepaRG cell line was used. HepaRG is a proliferative hepatoma-derived cell line that can be differentiated into hepatocyte-like and biliary-like cells. Differentiated HepaRG cells maintain key hepatic functions including drug transporters and xenobiotic-metabolizing enzymes. Metformin has been reported to protect differentiated HepaRG against APAP-induced cell injury, as well as offer protection against bioenergetic deficiencies; therefore, we studied the outcomes of APAP and metformin exposures on bioenergetic parameters in both proliferative- and differentiated-derived HepaRG. Using the Seahorse XFp extracellular flux analyzer proliferative and differentiated cells were found to have distinct mitochondrial bioenergetic alterations when exposed to these drugs. Secondly, as mitochondrial DNA (mtDNA) depletion has been observed in biopsy specimens obtained from human immunodeficiency virus-infected patients treated with NRTIs, we are characterizing ddC mitochondrial toxicity in different cell types. The effects of ddC exposure on cellular viability, bioenergetic parameters, and mtDNA maintenance are being conducted utilizing both proliferative and differentiated HepaRG as well as SJCRH30, a rhabdomyosarcoma-derived cell line. We developed a straightforward Southern blot and non-radioactive digoxigenin-labeled probe hybridization method to estimate relative mtDNA copy number in whole-cell DNA extracts. As ddC has been proposed to be repurposed for treating cancer, a better understanding of the mechanisms of NRTI-induced mtDNA damage in different cell types is warranted. I will provide an update on our laboratory's work.

Title: Bio-Physical tendencies with applied methods of mind/body/soul techniques sound frequencies and including the art of intuition

Marilyn Parkin | **International College of Medical Intuition, Inc., USA**

Abstract: This study was conducted to determine the effects of sound vibration on individuals with depression. The study also examined changes to the blood cells as observed through live blood analysis when the intervention of vibratory frequencies ranged from 64Hz to 600Hz. Variables consisted of a time frame of one hour of control group (n=17) listening to music from the position of a chair in a contained room, and experimental group (n=27) positioned on a sound vibrational treatment table. The random study was conducted on 7 males and 37 females with a minimal six-month diagnosis of depression. Measurement was accomplished through evaluation of live blood analysis level of aggregation and Profile of Mood States questionnaire for depression. A drop of blood from a finger puncture was obtained and examined through Darkfield microscopy for specific quality and level of visible clumping. Post blood analysis determined less clumping and healthier activity of the cells after intervention in the experimental group. The live blood analysis of the control group remained unchanged. Profile of Mood States for Depression indicated there was no significant difference between the experimental and control groups. Results indicated an increase in mood state from the use of music and blood aggregation was reduced only with the sound vibrational treatment table.

PEERS ALLEY MEDIA

Title: Effects of Far-Infrared & Terahertz Onnetsu Thermotherapy on Various Cancers, Rheumatoid Arthritis and other diseases

Kazuko Tatsumura | **Director, Gaia Holistic Health USA**

INTRODUCTION: Onnetsu means comfortable heat. Onnetsu Thermotherapy invented by Dr. Kazuko Tatsumura emits from a special patented ceramic; 1) Heat 2) Precise 8-10μ of vibration of Far Infrared SunRay and 3) Vibration of Terahertz. Dr. Tatsumura is the first in the world to incorporate Terahertz minerals to medical use from active volcanos stones from Japan. Worldwide patent pending.

METHODS: When Onnetsuki is slid over the skin, healthy areas are comfortable, but IF deep tissue is unhealthy or cold, degenerated, patient feels this spot to be 'hot'. When this 'hot spot' is effectively treated with Onnetsu Thermotherapy (Far-Infrared & Terahertz vibrations, and Heat), the hot sensation subsides and the Disease Conditions improve through vibrating water molecules of our deep tissue. Therefore, the Onnetsu Thermotherapy is both a diagnostic and therapeutic. Dr Kazuko's Onnetsu Thermotherapy is based on four historical and scientific facts. 1. Traditional Japanese Concept of the significance of Body Temperature. Hippocrates also has left quotes on Heat. 2. NASA's finding regarding Far-Infrared vibration from Sun light precise 8-10μ. Also, added is the specific Terahertz vibration of earth minerals from volcanos stones from the depth of our planet earth. 3. Immunology by Dr. Toru Abo, balancing autonomic nervous system to improve condition of white cells; Raising Immunity. 4. Promoting four flows of Energy throughout our body by using acupuncture meridian technique.

RESULT: Some countries (Peru, Cuba & Mexico) are practicing it in the hospitals and clinics. Clinical trials have shown improvements on many diseases: such as asthma, brain, ear & eye problems, cancers, diabetes, rheumatoid arthritis, tuberculosis and various pain conditions. Clinical studies from Cuba and Peru will be presented.

CONCLUSION: Onnetsu Thermotherapy is a new, easy & noninvasive treatment modality to treat difficult chronic medical conditions. Therapy uses Universal Vibrations, Heat, Light, Autonomic Nervous System Balance and Acupuncture Meridian System. Dr. Kazuko has taught Onnetsu Thermotherapy to MDs and health practitioners over past decades throughout the world.

ORGANIZING COMMITTEE MEMBERS

FEATURED TALKS

PEERS ALLEY MEDIA

Title: Outsmarting Cancer Cells Tactics to Circumvent Intervention: Activation of Apoptosis Pathways of Tumor Technology AAAPT: A Novel Synergistic Approach for Treating Cancer

Raghu Pandurangi | **Founder, President: Sci-Engi-Medco Solutions Inc., USA**

Introduction: Conventional chemotherapy can kill bulk cancer cells leaving behind cancer stem cells (CSCs) a ncer resistant cells (CRCs). CSCs and CRCs are found to be responsible for high recurrence of disea etastasis and making cancer cells refractory to future treatments. Tumor cells circumvent host-driven endogenous erapy-induced death signals by a) deactivating intrinsic/extrinsic cell death pathways (e.g. inactivating de ceptor/ligand CD95/CD95L activity), b) activating surviving pathways (e.g. NF-kB inducing anti-apoptotic protei ARP). Methods are needed to sensitize CSCs and CRCs to evoke a better response from chemotherapy, particula triple negative breast cancer (TNBC) patients. This is because TNBC patients have limited options a thracyclines or combination of chemotherapeutics (doxorubicin, paclitaxel, cyclophosphamide etc.) are still the fro e treatments, despite high off target toxicity including cardiotoxicity.

Scope: Hence, improving chemotherapy efficacy by targeted sensitization of nonresponsive cells (i.e. CSCs a RCs) to make chemotherapy effective at lower doses (i.e. expanding therapeutic index) is an unmet medical need a applicable to most cancer treatments.

Results: Sci-Engi-Medco Solutions (SEMCO) invented and patented technology "A priori Activation of Apoptc athways of Tumor" (AAAPT) which is shown to sensitize both CSCs and CRCs to chemotherapy. AAAPT has thr atforms; 1. Plant based natural Defensin (Def1) protein, 2. Natural Human Beta Defensin (hBD-1) and Sn olecule Vitamin E derivative. The promising preliminary *in vitro* and *in vivo* data by AAAPT leading candidates (e MP-001/002) in TNBC tumor models indicates a) the enhancement of therapeutic indices of current treatme cluding chemotherapy, radiation and inhibitors, b) lowered IC-50 and ED 50 significantly (5-0 times) and reduc e cardiotoxicity of chemotherapy at neoadjuvant settings with AAAPT.

Conclusions: AAAPT addresses the fundamental aberrations of cancer cells circumventing intervent espective of nature of intervention

ORGANIZING COMMITTEE MEMBERS

Title: The generation of anti-tumour bystander killing by genetically engineered ovarian tumour cells and the influence of ?-irradiation: implications for clinical use as Cancer Vaccines

Jehad Zweiri | University of Liverpool-Faculty of Medicine/UK

Abstract: Cellular based therapeutic approaches for cancer rely on careful consideration of finding the optimal cell to execute the cellular goal of cancer treatment. Cell lines and primary cell cultures have been used in some studies to compare the *in vitro* and *in vivo* efficacy of autologous *vs* allogeneic tumour cell vaccines. This study examines the effect of ?-irradiation on a range of tumor cell lines in conjunction with suicide gene therapy of cancer. To determine the efficacy of this modality, a series of *in vitro* and *in vivo* experiments were conducted using genetically modified and unmodified tumor cell lines. Following co-culture of HSV-TK modified tumor cells and unmodified tumor cells both *in vitro* and *in vivo* we observed that the PA-STK ovarian tumor cells were sensitive to ?-irradiation, completely abolishing their ability to induce bystander killing of unmodified tumor cells. In contrast, TK-modified human and mouse mesothelioma cells were found to retain their *in vitro* and *in vivo* bystander killing effect after ?-irradiation. Characterisation of tumor cell death showed that PA-STK cells underwent pyknosis (necrosis) after ?-irradiation. These results suggest that PA-STK cells are not suitable for clinical application of suicide gene therapy of cancer, as lethal ?-irradiation (100Gy) interferes with their bystander killing activity. However, the human mesothelioma cell line CRL-5830-TK retained its bystander killing potential after exposure to similarly lethal ?-irradiation (100Gy). CRL-5830 may therefore be a suitable vehicle for HSV-TK suicide gene therapy. This study highlights the diversity among tumor cell lines and the careful considerations needed to find the optimal tumor cell line for this type of whole cell tumour vaccination.

PEERS ALLEY MEDIA

Title: Synchronous versus sequential chemo-radiotherapy in patients with early stage breast cancer (SECRAB): A randomised, phase III, trial

Indrajit N Fernando | **Cancer Centre, University Hospitals Birmingham**

Background: The optimal sequence of adjuvant chemotherapy and radiotherapy for breast cancer is unknown. SECRAB assesses whether local control can be improved without increased toxicity.

Methods: SECRAB was a prospective, open-label, multi-center, randomized phase III trial comparing synchronous to sequential chemo-radiotherapy, conducted in 48 UK centers. Patients with invasive, early stage breast cancer were eligible. Permitted chemotherapy regimens included CMF and anthracycline-CMF. Synchronous radiotherapy was administered between cycles two and three for CMF or five and six for anthracycline-CMF. Sequential radiotherapy was delivered on chemotherapy completion. Radiotherapy schedules included 40 Gy/15F over three weeks, and 50 Gy/25F over five weeks. The primary outcome was local recurrence at five and ten years, defined as time to local recurrence, and analyzed by intention to treat.

Findings: Between 02-July-1998 and 25-March-2004, 2297 patients were recruited (1150 synchronous and 1146 sequential). Baseline characteristics were balanced. With 10.2 years median follow-up, the ten-year local recurrence rates were 4.6% and 7.1% in the synchronous and sequential arms respectively (hazard ratio (HR) 0.62; 95% confidence interval (CI): 0.43–0.90; p=0.012). In a planned sub-group analysis of anthracycline-CMF, the ten-year local recurrence rates difference were 3.5% versus 6.7% respectively (HR 0.48 95% CI: 0.26–0.88; p=0.018). There was no significant in local recurrence for patients treated with CMF at 10 years. Although there was no significant difference in overall or disease-free survival there was a trend to benefit in the anthracycline-CMF patients in both DFS and OS. 24% of patients on the synchronous arm suffered moderate/severe acute skin reactions compared to 15% on the sequential arm (p<0.0001). There were no significant differences in late adverse effects apart from telangiectasia (p=0.03).

Interpretation: Synchronous chemo-radiotherapy significantly improved local recurrence rates. This was delivered with an acceptable increase in acute toxicity. The greatest benefit of synchronous chemoradiation was in patients treated with anthracycline-CMF.

FEATURED TALKS

PEERS ALLEY MEDIA

Title: Personalized and Precision Medicine as a Unique Avenue to have the Healthcare Model Renewed to Secure the National Biosafety: To Get Cancer Treated or Cured?

Sergey Suchkov | **Sechenov University, Russia**

Abstract: A new systems approach to diseased states and wellness result in a new branch in the healthcare services, namely, personalized and precision medicine (PPM). To achieve the implementation of PPM concept, it is necessary to create a fundamentally new strategy based upon the subclinical recognition of biomarkers of hidden abnormalities long before the disease clinically manifests itself.

Each decision-maker values the impact of their decision to use PPM on their own budget and well-being, which may not necessarily be optimal for society as a whole. It would be extremely useful to integrate data harvesting from different databanks for applications such as prediction and personalization of further treatment to thus provide more tailored measures for the patients resulting in improved patient outcomes, reduced adverse events, and more cost effective use of the latest health care resources including diagnostic (companion ones), preventive and therapeutic (targeted molecular and cellular) etc. A lack of medical guidelines has been identified by the majority of responders as the predominant barrier for adoption, indicating a need for the development of best practices and guidelines to support the implementation of PPM!

Implementation of PPM requires a lot before the current model “physician-patient” could be gradually displaced by a new model “medical advisor-healthy person-at-risk”. This is the reason for developing global scientific, clinical, social, and educational projects in the area of PPM to elicit the content of the new branch.

ORGANIZING COMMITTEE MEMBERS

PEERS ALLEY MEDIA

Title: Modelling and optimization of HIV-1 infection treatment

Irina Gainova | **Sobolev Institute of Mathematics, Novosibirsk, Russia**

Abstract: Despite the fact that since the discovery of the etiological agent of AIDS - the human immunodeficiency virus (HIV) type 1 - more than 35 years have passed, the problem of the transmission of HIV-1 infection, treatment and quality life of people living with HIV remains actual. The spectrum of diseases caused by HIV-1 is broad and ranges from opportunistic infections and cancers to systemic physiological disorders like encephalopathy and neurocognitive impairment.

Today, combination antiretroviral therapy is available and continuous treatment can usually control the virus to below detectable level in blood. Nonetheless, HIV can persist in form of a latent provirus in the host genome of infected cell that is one of the main obstacles on the way to eradication of HIV-1 infection.

A hallmark of both tumor growth and chronic virus infections with persisting antigen, such as HIV-1 infection, is the downregulation of immune effectors mechanisms. The main cellular targets of HIV are CD4+ T-lymphocytes and macrophages, which directly participate in the regulation of immune response. A paradoxical feature of HIV is also that activation of the immune system does not lead to suppression of virus replication, but to opposite to activation of latently infected cells, which start to produce new viruses.

Mathematical modelling of the interaction between immune system cells and HIV holds great promise in providing deeper insights into the immune processes at the various levels: cellular, tissue, organism. Together with upcoming new therapy options like immune check-point inhibitors and anti-fibrotic drugs, and the demand of HIV-1-infected individuals to completely restore their immune systems and eliminate HIV, personalized treatment approaches require the development of robust and efficient mathematical methods. Here we consider a few representative models for optimization of HIV-1 infection treatment.

PEERS ALLEY MEDIA

Title: Novel preclinical models for drug validation studies in cancer and osteoarthritis fields

Mingxing Wei | Scientist, Cellvax, France

Abstract: Cellvax, founded in 2001, is a French SME which provides complete preclinical innovating drug validation studies both in vitro and in vivo allowing to accelerate the drug development process for unmet needs related to severe human diseases, mainly in Cancer and Osteoarthritis (OA) fields. Cellvax, founded in 2001, is a French preclinical CRO which provides complete innovating drug validation studies both in vitro and in vivo allowing to accelerate the drug development process for unmet needs related to severe human diseases, mainly in Cancer and Osteoarthritis (OA) fields. Through a strategic partnership with two Chinese CROs, Cellvax can provide large animal studies such as in monkeys, Beagle dogs and pigs, and for clinical trials, product registrations in China. Since 2019, Cellvax made a strong commitment in GLP implementation. Cellvax has a strong will to work and collaborate with biotech companies, public and pharmaceutical laboratories in order to speed up the development of innovative compounds. By offering its know-how and its capacity of innovation, Cellvax is willing to collaborate with biotech companies, public laboratories and pharmaceutical societies. Also, academic groups or small biotechs interested in working with Cellvax towards EU grant funding applications. Cellvax was created by a motivated and complementary team consisting of scientists and experts in these fields. By offering its know-how and its capacity of innovation, Cellvax is willing to collaborate with public and private laboratories. Cellvax's expertise is based on its know-how in the field of molecule biology, cellular biology, and original in vitro and in vivo models. These services can be offered to all laboratories involving in anti-cancer and anti-OA drug development process. These proposed services adapt to the validation and development of drug candidates and fully validated such as sub-cutaneous and orthotopic tumors models in animals; in vitro and in vivo angiogenesis models; an original "Nodule" system, in vivo imaging, bio-distribution, pharmacokinetics, toxicity, spontaneous and induced animal models for OA, etc. Cellvax is always ready to obey market evolution and to satisfy its customers' specific needs all over the world. Cellvax is strongly willing to develop and enhance its national and international collaboration with public laboratories, biotechnological companies and pharmaceutical companies.

ORGANIZING COMMITTEE MEMBERS

Title: Synergistic multidug cocktails specific to colorectal carcinoma subtypes

P. Nowak-Sliwinska | **University of Geneva, Geneva, France**

Abstract: The key to improvement of cancer therapy resides in the identification of optimal combination of drugs. This is non-trivial task due to the large number of possibilities, especially when multiple drugs are combined at various doses. Colorectal carcinoma is clinically treated with chemotherapeutics, often supplemented with targeted agents. However, an urgent need exists for treatment improved long-term activity and reduction of side effects. We used our previously developed statistical approach termed therapeutically guided multidrug optimization (TGMO). This straightforward approach of *in vitro* cell viability testing and statistics-based analysis in only few experimental steps identified optimal synergistic low-dose drug combinations. RNA sequencing and phosphoproteomics analyses indicated that multi-drug partial target inhibition resulted in subtle multi-node regulation of cell signaling. Mechanism of action of these ODCs mostly converged towards MAP kinase signaling and cell cycle arrest. Selected cell-specific ODCs were subsequently translated to *in vivo* models, in which the ODCs reduced efficiently tumor growth and significantly outperformed standard chemotherapy combination, without evidence of side-effects.

Pharmacokinetic studies demonstrated that the drug combinations administration significantly enhanced drug bioavailability. Finally, the optimized ODCs were also active in freshly resected patient material. The translational and multidisciplinary nature of this study aims for preparing an improved therapeutic combination regimen for testing in cancer patients.

FEATURED TALKS

PEERS ALLEY MEDIA

Title: Urinary mitochondrial DNA mutations: Naturally occurring tumour 'barcodes' to trace bladder cancer recurrence

N. Chipampe | Newcastle Cancer Centre, Newcastle University, UK

Abstract: Bladder cancer is the most common urinary tract cancer with 10,000 new UK diagnoses annually. Bladder cancer clearly illustrates the association between ageing and cancer, the likelihood of developing the disease increases with age. The current diagnostic test requires cystoscopy, a procedure to visualise inside the bladder, which is **invasive**, **uncomfortable** and **time consuming**. This requires lifelong monitoring for many patients thus being one of the most expensive cancers to manage. The major clinical problem is the 40% risk of recurrence within 3 years. Associated with the risk of stage progression to muscle invasive cancer carrying a high mortality risk. Half of all recurrence is caused by incomplete tumour removal. Herein, lies the unique translational opportunity of mitochondrial DNA (mtDNA). During ageing mtDNA accumulates mutations that can lead to disease. Tumour cells are readily shed into urine, suggesting a urine sample could be used for non-invasive testing, to detect bladder cancer recurrence. We therefore propose to identify a tumour biomarker, or "barcode" that could be used to detect tumour cells within urine.

Methods: Bladder tissue sections were cut, stained and tumour content scored by a Pathologist. DNA was extracted from cystectomy patients' urine, blood and bladder biopsies. PCR was performed to amplify mtDNA and confirmed by gel electrophoresis. mtDNA sequencing was performed to detect mtDNA variants.

Results: mtDNA mutations are tumour specific and absent from cells in the patient's normal bladder lining. mtDNA variants can be detected in a patient's bladder tumour tissue and confirmed within the patient's cellular urine and cell-free urine compartment.

PEERS ALLEY MEDIA

Title: Age related copy number variations reveal a hepatocellular carcinoma specific gene set

Shu Zhang | **The Second Affiliated Hospital of Xi'an Jiaotong University, *China***

Abstract: Age is the single most significant risk factor for cancer development, with the majority of cancer cases being diagnosed around the age of 65. Advances in the research of both cancer and aging have shed some light on the common cellular pathways of these supposedly contradictory processes. To further decipher this inherent dichotomy, we reanalyzed the copy number variation data of all the solid cancer in the TCGA PanCancer Atlas studies, containing 32 studies 10967 samples. Consistent with the common sense, the peak of diagnosis age located in 60 to 65. We identified the incidence of deletion in 30 genes were significantly higher in group of 60-65, as compared the age groups with current bins. Their incidence patterns among each group were almost identical to that of diagnosis age. We further picked up 11 genes located at Chr 6q to validate their significance by another cohort, TCGA Firehose Legacy. The most interesting finding is the alteration of this gene set only linked the worse OS and PFS in hepatocellular carcinoma (HCC), not in other cancer type. Their CNV also show a co-occurrence type. Based on the PanCancer Atlas data, deregulation of their mRNAs can be attribute to deletion and also methylation. The function of this gene set involved the activation of OXPHOS, metabolism of amino acid, ribosome biogenesis, and modulation of WNT/PCP signaling pathway, which can be linked to the cell proliferation, metastasis, and drug resistance. This gene set could predict poor outcomes and may provide potential novel therapeutic targets for the patients with HCC.

PEERS ALLEY MEDIA

Title: HSF1-dependent regulatory mechanism of Hsp90-binding immunophilins on hTERT subcellular localization and biological action

Mario D. Galigniana | **Instituto de Biología y Medicina Experimental, Argentina**

Abstract: Cancer cells achieve proliferative immortality by up-regulating telomerase. hTERT is the telomerase catalytic subunit responsible for the reverse-transcriptase activity. hTERT forms oligomeric complexes with a template functional RNA, the chaperone Hsp90,the co-chaperone p23, and other accessory proteins. Recently, our laboratory demonstrated that a significant pool of the Hsp90binding immunophilin FKBP51 is located in mitochondria. FKBP51 shows antiapoptotic action, is overexpressed in cancer cells, and undergoes nuclear-mitochondrial trafficking upon the onset of stress. In this study it is demonstrated that FKBP51 nuclear accumulation depends on the activation of the transcription factor HSF1. In the nucleus, FKBP51 and also its highly homologous partner FKBP52 bind to the hTERT•Hsp90 nuclear heterocomplex in a peptidylprolyl-isomerase (PPIase)independent manner. Both immunophilins enhance telomerase enzymatic activity in a PPIasedependent fashion. The basal nuclear localization of hTERT is favored by FKBP52 due to two reasons: a) its involvement in the Hsp90•FKBP52•dynein-dependent mechanism for hTERT cytoplasmic transport towards the nucleus, and b) by anchoring hTERT to the nucleoskeleton matrix. The disruption of the hTERT heterocomplex with the Hsp90 inhibitor radicicol or due to the overexpression of the Hsp90-binding TPR peptide, delocalizes hTERT from nucleus to cytoplasm, demonstrating a cardinal role of the chaperone in this process. On the other hand, the Hsp90-free hTERT becomes unstable and is targeted to proteasome degradation, unless hTERT is translocated to mitochondria, where it seems to complement the overall antiapoptotic action of FKBP51. Oxidative stimuli (H2O2, arsenite, BSO, tert-butyl-hydroperoxide, etc.) also disengage hTERT from nuclear structures favoring its nuclear export. Importantly, oxidative stress increases hTERT expression. Because several stimuli such as high ionic strength, high glucose, heat-shock, etc. also show similar effect, it was hypothesized that the HSF1 activation is involved. This was confirmed due to the lack of hTERT induction in HSF1-KO cells compared to wild-type cells, and by the high basal expression of hTERT due to the mere overexpression of HSF1, even in the absence of stimuli. It is concluded that: a) the nuclear translocation of FKBP51 from mitochondria depends on the activation of HSF, b) the expression level of hTERT also depends on HSF1 activation, and c) the subcellular localization and stability of hTERT is commanded by Hsp90Because some times Chemotherapy is more harmful, than Cancer. Chemotherapy kill immunity, kill WBC etc.

FEATURED TALKS

PEERS ALLEY MEDIA

Title: Implication of Microsatellite Instability Pathway in Outcome of Colon Cancer in Moroccan Population

Fatima El Agy | **Hassan II University Hospital, Morocco**

Abstract: Tumors with microsatellite instability (MSI tumors) have distinct clinico-pathological features. However, the relation between these tumor subtype and survival in colon cancer remains controversial. The aim of this study was to evaluate the overall survival (OS) in patients with MSI phenotype, in FES population.

Methods. The expression of MMR proteins was evaluated by Immunohistochemistry for 330 patients. *BRAF*, *KRAS* and *NRAS* mutations were examined by Sanger sequencing and Pyrosequencing methods. Association of MSI status with patient's survival was assessed by Kaplan–Meier method and log-rank test.

Results. Mean age was 54.6 years (range of 19-90 years). The MSI status was found in 11.2% of our population. MSI tumors were significantly associated with male gender, younger patients, stage I-II, right localization and a lower rate of lymph node and distant metastasis. The OS tend to be longer in MSI tumors than MSS tumors (109.71 versus 74.08*),* with a difference close to significance (*p= 0.05*).

Conclusion. Our study demonstrates that MSI tumors have a particular clinicopathological features. The results of survival analysis indicate that MSI status was not predictive of improved overall survival in our context with a lower statistical significance (*P=0.05*) after multivariate analysis.

ORGANIZING COMMITTEE MEMBERS

PEERS ALLEY MEDIA

Title: Lazy lateral technique: An innovative approach for upper outer quadrant breast cancer near the anterior axillary fold

M. Abdelhamid | Zagazig University, Zagazig, Egypt

Abstract: Surgical treatment of breast cancer was challenged over years. Breast conservation is as oncologically safe as mastectomy and gives better cosmetic and psychological outcomes.**Aim:**The aim of our study was to evaluate the oncological and esthetic outcomes of the lazy lateral technique as a new approach for tumor located at the upper outer quadrant near anterior axillary fold.

Patients and methods: Between October 2012 and September 2014, 18 patients with early breast cancer at the upper outer quadrant and near the anterior axillary fold were surgically treated with the lazy lateral technique.

Results:the age of our patients ranged from 36 to 58 years (median: 47 years). Most of the patients in this study were diagnosed as having infiltrating ductal carcinoma (14 patients, 77.7%). The size of the tumor ranged from 0.9 to 3.8 cm. No involved margin on frozen section. Seroma was the most common postoperative complication and developed in two (11.1%) patients. The cosmetic outcome was excellent in 12 (66.6%) patients, good in five (27.7%) patients, and satisfactory in one (5.5%) patient. No local recurrence or systemic metastasis was noticed in our patients during a median follow-up period of 38 months (range:
27–49 months).

Conclusion: The lazy lateral technique is a novel approach for surgical treatment of upper outer quadrant breast cancer near the anterior axillary fold. It is an oncologically safe procedure and promotes satisfactory esthetic outcomes.

PEERS ALLEY MEDIA

Title: PRACTICAL USE OF AMINO ACIDS IN ONCOLOGY: REPLACEMENT THERAPY AS A STRUCTURAL COMPONENTS OF PROTEINS AND / OR FOR CORRECTION OF METABOLISM IN QUANTITIES COMPARATIVE WITH THEIR ENDOGENOUS

L. Nefyodov | **Yanka Kupala Grodno State University, Belarus**

Objectives: Changes in amino acid pool of oncology patients specifically characterize development of cancer and largely induced by metabolic competition between the tumor and the tumor carrier. The aim of our research is the formulation of methodology creation for practical application of the regulatory action of endogenous concentrations of separate amino acids or their pathogenetically justified compositions. Our clinical studies of biological fluids and tumors with cancer depending on the location and stage of the process showed significant changes in concentrations of amino acids which regulate processes of antitumor response, oncogenesis, immunogenesis and apoptosis.

Methods: Our methodology is based on studies of concentrations of free amino acids, their derivatives, precursors and metabolites, as well as biochemical marker parameters in healthy donors and patients with oncology and construction of an empirical mathematical model consisting of pathogenic markers of oncology and amino acid profiles, specialized development of new formulations of the compositions of infusion solutions of amino acids.

Results: The amino acids pool as a dynamical system-generated supply of them from outside, but also due to endogenous synthesis, transport, degradation and excretion and allows the identification of “key points” in intermediate metabolic equilibrium shift that may reflect ratios at the individual levels of endogenous amino acids and related species compounds to achieve “metabolic comfort”.

Conclusion: On the basis of the our data we suggest that the differences discovered in certain amino acids concentrations in fluids and tissues are criteria in early diagnostics as in estimation of the efficacy of specific cancer treatment. The creation methodology of pathogenetic compositions of amino acids and their derivatives on the basis of their physiological concentration for practical application of their regulatory effects in oncology was discussed.

PEERS ALLEY MEDIA

Title: A retrospective study of malignant melanoma from a tertiary care centre in Saudi Arabia from 2004 to 2016

K Anwar| **Alfaisal University Riyadh Saudi Arabia**

Background: Malignant melanoma is a well-known and commonly lethal tumour yet there exists scarce published information available from Saudi Arabia.

Materials and methods: This study examined the demographic, clinical, and histopathological profile of melanoma in a sample of Saudi patients over a period of 13 years. Medical records of 98 patients from 2004 to 2016 were retrieved from the Department of Pathology and Laboratory Medicine at King Faisal Specialist Hospital (KFSH), Riyadh, Saudi Arabia.

Results: Forty two males and fifty six females (median age of 58 years) were analysed. Most cases were diagnosed in patients aged 50 years or above. The most common sites of occurrence were the extremities, especially the feet, followed by the head and neck, and then mucosal regions. Most mucosal melanomas were located in the mouth. The most common histopathological form was nodular melanoma (38 cases) followed by acral lentiginous melanoma (27 cases). Most of the cases were diagnosed in late diagnostic stages III and IV (59 cases) and most had higher Clark's level and stage V Breslow thickness. The cases with preceding history of xeroderma pigmentosum and dysplastic nevi tended to be diagnosed earlier. The most common mode of treatment was surgical resection. Patients on palliative treatment were older. Only 27/40 patients were confirmed to be alive and the rest were lost to follow-up.

Conclusion: Our data contrast with previously published studies from other parts of the world. Further work is needed to confirm our findings of female preponderance, common histological subtypes of nodular and acral melanomas, and the high involvement of oral mucosa in our Saudi patients.

PEERS ALLEY MEDIA

Title: 2D to 3D Conformal Radiation Therapy for Breast Cancer

Vinay Sharma | **University of Witwatersrand, Johannesburg South Africa**

Abstract: Conformal radiation therapy for breast cancer is being used as a standard radiation therapy technique in most centres in the world.

Aim: The aim of the study was to document the doses to lung and heart (organs at risk) in addition to breast tumour volumes to correlate with treatment related toxicities.

Methods: A total of 183 patients of cancer of breast underwent CT scans and planning procedure after decision at the multidisciplinary management meeting during 2016-19. Both right and left breast were almost equally affected (Right – 98 patients (54%) and left -85 patients (46%)). All patients had MUGA scans before RT planning. Sixty-six patients (37%) had conservative breast surgery and 117 had mastectomies. One hundred eleven patients (61%) received 50Gy in 25 fractions and 70(39%) patients had 40.05Gy in 15 fractions. The Radiation therapy was delivered using 6Mv photos with different fields. The patients with conservative surgery received a boost to the tumour bed following tangential field. The patients with locally advanced disease and nodal involvement received radiation to chest wall as well lymph drainage areas. Fifty-one percent (93 patients) had radiation to chest wall and lymph drainage areas; 38 patients (21%) had tangential field and tumour bed boost. The lung constraints used were V20 =≤30Gy, V8= 35-40% and mean lung dose = <15Gy.

Results: One hundred and Sixty - eight patients (92%) achieved the lung constraints. The heart constraints used were V25Gy = <10% and mean heart dose = <26Gy. The heart constraints both V25 as well as mean heart dose could be achieved in all except 1 patient.

ORGANIZING COMMITTEE MEMBERS

PEERS ALLEY MEDIA

Title: Efficacy and Safety of Oncoxin-Viusid, a Nutritional Supplement, in Twenty Patients with Stage IIB-III of Cutaneous Melanoma. An open-label proof of concept study

Olaine R. Gray Lovio | **Manuel Fajardo University Hospital, La Habana, Cuba**

Background: Surgery is the treatment of choice of melanoma, but in advanced stages, it is often necessary to combine this with other therapeutic options. Oncoxin-Viusid has demonstrated antitumor and immunomodulating effects in various type of cancers, in addition to boosting the antiproliferative effect of standard chemotherapy agents in experimental studies. Our study was aimed to identify the efficacy and safety of the Oncoxin-Viusid as an adjuvant treatment for patients with stage IIB-IIIA cutaneous melanomas.

Methods: From September 2014 to April 2018, a proof of concept, open label nonrandomized and uncontrolled study was conducted at the Manuel Fajardo University Hospital (Havana, Cuba), including 20 patients with histologically-confirmed diagnosis of stage IIB-III of primary cutaneous melanoma. All patients received surgical treatment with or without chemotherapy in combination with Oncoxin-Viusid 25 ml twice a day for 1 year. Overall and Progression Free Survival and 95 % confidence interval was estimated after one year of inclusion and quality of life was measured at inclusion and after a year using QLQ-C-30 EORTC questionnaire.

Results: Most of the patients were women with a median age of 59 years, cutaneous phototypes II-III, occupations without photoexposure, without personal or family background of cutaneous cancer. 40 % of patients presented with superficial spreading melanoma, epithelioid presentation being histologically predominant. Adverse reactions were, for the most part, mild and short-lived. There were two deaths among 3 patients that progressed. Two patients were early withdrawal to follow-up. Overall survival estimated was 90 % [95 CI: 0.65; 0.97]

Conclusion: Nutritional supplement Oncoxin-Viusid showed safety; meanwhile patients kept a stable quality of life at the end of study and a high overall survival rate.

PEERS ALLEY MEDIA

Title: AWARENESS ABOUT CANCER

Salam Azad | **President, Soheli Mirza Cancer Foundation, Dhaka, Bangladesh**

Abstract: Bangladesh, at 160 million people, is the ninth most populous country in the world. There are almost two million cancer patients in my country, with about two lakh patients newly diagnosed with cancer each year. As an overview, lung cancer and mouth-coronary cancer rank as the top two prevalent cancers in males. Other types of cancers are esophagus cancer and stomach cancer. In women, CA Ovary and breast cancer are most prevalent.

This is my pleasure that organizer invite me as a keynote speaker. After Yokohama ,Japan October 2017 and Tangier of Morocco May 2018 by IASIC, Tokyo, Japan May 2019- this my 4th participation .

All of speakers in this house try to tell about treatment protocol of different kind of cancer, like chemo therapy, Radio therapy, Immunotherapy etc. But I try to discuses on awareness only. Awareness is the only prevention. Slogan of our organization AWARENESS FIRST. We, 'Soheli Mirza Cancer Foundation' aware the people of Bangladesh about cancer by work shops, Cancer awareness camp, seminar, symposium and others way / ways.

My wife, Soheli Mirza took treatment almost one and half year in the All India Institute of Medical Science (AIIMS), New Delhi.. I am thankful, But sorry, not grate full to cancer specialist of AIIMS. They can try, but they cannot do any positive outcome for treatment of my wife. How can they do? Because there is no medicine for fully cure of cancer all over the globe.

What is the cause of cancer ? Genetic, food habit, smoking etc ? No body knows actual cause of Cancer. If know, medicine for cure of Cancer invented and thousand of man-women-children can able to survive. Suspected some of cause, like smoking. If the cause of lunch cancer is smoking. Why not stop cultivation of tobacco?

Awareness better than treatment. If person aware about cancer her / his malignancy detected early or earliest. Early detection means extended her / his life.

Before operation or started treatment protocol it is mandatory that finding the stage of malignancy. If stage cross two please don't go to operation or don't give the patients any kind of treatment protocol.

Because some times Chemotherapy is more harmful, than Cancer. Chemotherapy kill immunity, kill WBC etc.

PEERS ALLEY MEDIA

Title: Muco-epidermoid carcinoma of lung: A case report

SMA Islam | National institute of cancer research and hospital, Dhaka, Bangladesh

Abstract: Mucoepidermoid carcinoma (MEC) is a rare lung cancer constitute 0.1-0.2% of all lung cancer.MECs most often arise from the salivary glands most commonly from parotid and submandibular. Pulmonary MECs are proximal bronchial origin with symptoms related to bronchial obstruction such as cough,hemoptysis,wheezing and post obstructive pneumonia.

Histologically, collection of mucus-secreting, squamous and intermediate cell types are common. The prognosis of localized low-grade disease is excellent. Reported 5- and 10-year survival rates are very good. Locally advanced high-grade disease has less favorable prognosis and most of the patients subsequently succumb to the disease. We are reporting a case of locally advanced MEC of left lung at the age of 13 years on 2003 and subsequently receive local and systemic therapy with recurrent flare during course of treatment and ultimately presented with metastatic disease with deteriorating clinical condition during 2019. We share our knowledge about the disease in our clinical setting with review of cases presented worldwide.

PEERS ALLEY MEDIA

Title: Gynecomastia as a Late Complication of Childhood Cancer and its Treatment that Can Affect the Quality of Life of Male Survivors

Mahdi Shahriari| Shiraz University of Medical Sciences, Shiraz, Iran

Abstract:

Background: Childhood cancer is relatively rare, and nowadays it is curable in more than 80% of patients. Childhood cancer therapy is directed not only at improving survival but recently, we also concentrate on reducing late effects. We want cancer children to survive with an excellent quality of life.

Methods: In this review article, all articles related to an endocrine complication of cancer in children were collected. Additionally, studies that related to gynecomastia and fertility outcomes of the survivors of childhood cancer were selected and included in the study.

Results and conclusion: Gynecomastia and fertility outcome of the survivors of childhood malignancies should be considered in follow-ups of teen ages and young adults and should be approached in an accurate manner and also managed in comprehensive teams. We designed algorithmic guideline of approach to gynecomastia in cancer survivors.

Title: Report of 20 years' Experience on the effect of Intensive Intrathecal chemotherapy on prognosis of childhood lymphoblastic leukemia with central nervous system (CNS) involvement

Title: Application of a statistical modelling to handle breast cancer patients with no recurrence

Mahdieh Ghaniani || Shiraz University of Medical Sciences, Shiraz, Iran

Background: Recurrent event data arise frequently in longitudinal medical studies. In many situations, there are a large portion of patients without any recurrences, manifesting the zero-inflated nature of the data. Also, there often exists a terminal event which may be correlated with the recurrent events. The goal of this study is to extend the applications of joint frailty model to identify the prognostic factors associated with curing in patients with breast cancer.

Methods: As a prospective study, medical records of women who had been attended to cancer research center, Shahid Beheshti University of medical sciences from January 1998 to February 2016 were reviewed. Finally after an initial review of medical records, 711 patients were included in the study and analyzed. A checklist that included items drawn from demographic background of patients was provided in the study. Two joint frailty models for zero-inflated recurrent events, combining a logistic model for "structural zero" status (Yes/No) and a joint frailty proportional hazards model for recurrent and terminal event times were performed to identify factors associated with BCS.

Results: The mean age of patients was 38.2 years. The numbers of subjects with 1, 2, 3, 4 recurrent events were 392, 209, 97, and 15, respectively. The median follow-up time was 6.87 years. There were 137 (19.2%) deaths from cancer during the follow-up. Among the 574 patients who were censored, 418 had no tumor recurrence. That is, there may be a large proportion of "cured" subjects. We can see that the radiation (OR=6.02, CI=(3.87-8.61)) and tumor size interaction with radiation(OR=1.065,CI=(1.002-1.26))were significant in the cure model ($p < 0.05$) that it meanspatients with smaller tumor sizes were more likely to be cured by radiation therapy.

ORGANIZING COMMITTEE MEMBERS

PEERS ALLEY MEDIA

Title: Anthocyanin Acts As Scavenger For Heavy Metal ions , Attack Cancer cell, and Interacts With Uric Acid and Urea To Expel it Through Urine System

Jaleel Kareem Ahmed | **University of Babylon, Iraq**

Abstract: Anthocyanin is found mainly in red beet juice, cherry , red rose • It is red color pigment with high solubility in water . • The power of exchangeable proton in its juice from red beet nearly 6.4 while in red rose juice more acidic .i.e. pP < 6.4 . • The radius of exchangeable proton = 1.5 x 10-15 meter thus it is called trans membrane proton. • This proton is called exchangeable proton due to its ability to exchange with metal ions and precipitated as metal anthocyanate • This is similar to the behavior of cation exchanger in demineralization processes of water (hetero reaction) while with the anthocyanin juice is homogenou reaction. • Addition of heavy metal salt like metal nitrate (water soluble) result in sudden precipitation of metal anthocyanate and the color of the solution disappear slowly and the pP of the solution become more acidic due to the formation of nitric acid in which the pP reaches nearly four . • No precipitations shown with sodium and potassium ions while with magnesium and calcium ions need high concentration of them . • Anthocyanin can be used to purify water from poisonous metals ions . • Anthocyanin color in acidic solution is shine red while changed to reddish green color in basic solution and deep red color in neutral solutions so it is suitable indicator in acid-base reaction more suitable than classically used phenophthalene indicator which is water insoluble. • Irrigation of red rose plant with acidic solution like hydrochloric acid result in changing the color of the rose from deep red to shine red , also that happen when red rose plant left in acidic atmosphere . this is a good test for detection of acidic rain in industrial area. • A case study is carried out on the urine of a man of (40) years old. Two samples urine were taken from the urine system of that man, one after drinking concentrated red beet juice (mechanically extracted) and the second one without drinking juice. The results show that: a- Anthocyanin formed hydrogen bonding with uric acid and urea which enhancing detoxification of both of them from blood. b- Anthocyanin lowers the acidity of urine which is good for lessening human tension. c- Anthocyanin reduces viscosity of urine even less than that of pure water which enhance the flow of urine through urine system. d- Reducing conductivity of urine i.e. captures proton of uric acid. e- Changing color of urine from yellow to pink as shown in figure above

FEATURED TALKS

PEERS ALLEY MEDIA

Title: Reducing power of seeds from some Algerian fresh fruit and vegetable varieties using olive oil as extraction solvent

S Benamara | **Research Laboratory in Food Technology (FSI/UMBB), Boumerdès, Algeria**

Abstract: This work investigates the reducing power (RP) of seeds from twelve fresh fruit varieties (FFS) and six fresh vegetable varieties (FVS) from Algeria, using lipophilic extraction, the olive oil (OO) being the extraction solvent. Actually, this is an evaluation of the efficiency of OO-based seed plant infusions in terms of antioxidant activity. The RP of 56 plant products (of which 17 FV) was recently reported by Allane and Benamara (2019) using such lipophilic extraction. Lipophilic extracts were prepared according to Hamed (2006) and Saha et al. (2012), whereas the quantification of RP was performed according to Oyaizu (1986). Results showed that among the considered fruits, eight species gave a positive RP value against four species with a negative RP value. By comparing the means with ANOVA at 0.05 significance level, there are globally three groups of FFS: group with the highest RP that is 20 mg BHT eq. $\chi\ g^{-1}$ wet weight (ww)<RP<30 mg BHT eq. $\chi\ g^{-1}$ ww (prickly pear, pomegranate and black date fruit), group with the lowest RP that is RP< 10 mg BHT eq. $\chi\ g^{-1}$ ww (red grapes, yellow plums and Deglet-Nour date fruit) and intermediate group with RP value of about 10 mg BHT eq. $\chi\ g^{-1}$ ww (black cherry and apricot). Concerning the FVS, the broa beans show the highest RP value (~ 15 mg BHT eq. $\chi\ g^{-1}$ ww) which is twice that of tomato ($p<0.05$) and is seven times that of red peppers ($p<0.05$), whereas the rest of FVS shows a negative RP. So, the efficiency of OO-based FF seeds (FFS) and FVS, in terms of antioxidant activity have shown promising results but this efficiency is not systematic since it depends considerably on the plant product species. In particular, the findings open up broad prospects for new food excipients.

PEERS ALLEY MEDIA

Title: Human Papillomavirus Infection in genital Women in four regions of Senegal

El Hadji Seydou Mbaye | **Cancer Institute, Aristide Le Dantec Hospital, Senagal**

INTRODUCTION: Cervical cancer is the most frequent cancer among women in Senegal. However, there are few data concerning the HPV types inducing neoplasia and cervical cancers and their prevalence, in the general population of Senegal

AIMS: The aim of this study is to determine the prevalence of HPV infection in Senegalese women aged from 18 years and older.

MATERIALS AND METHODS: A study was performed on 498 cervix samples collected from healthy women aged 18 and older in Dakar. 438 other samples were collected from three other regions, Thiès, Saint Louis and Louga. The samples were screened for 21 HPV genotypes using an HPV type-specific E7 PCR bead-based multiplex genotyping assay (TS-MPG) which is a laboratory-developed method for the detection of HPV.

RESULTS: The prevalence for pHR/HR-HPV in the region of Dakar was 20.68%. HPV 52 (3.21%) was the most prevalent HPV type, followed by HPV 16 (3.01%) and HPV 31 (3.01%). In the regions of Thiès, Louga and Saint Louis, the prevalence for pHR/HR-HPV was 29.19%, 23.15% and 20%, respectively

CONCLUSION: The study revealed the specificity of the HR-HPV prevalence in Dakar and other regions of Senegal. The patterns differs from the one observed in the other regions of the world and rise the issue of the development of vaccination program in the country. Such a program should take into account the real HPV prevalence for an effective protection of HPV-associated diseases.

Title: Preclinical and Clinical Evidence of Metformin for Breast Cancer

Anindita De | JSS Academy of Technical Education, Noida, India

Abstract: Metformin, a well-acknowledged biguanide, safety profile and multi-action drug with low cost for management of type 2 diabetes, makes a first-class candidate for repurposing. The off-patent drug draws huge attention for repositioned for anticancer drug delivery recently. Still few unanswered questions are challenging, among them one leading question; can metformin use as a generic therapy for all breast cancer subtypes? And is metformin able to get over the problem of drug resistance? The article focused on the mechanisms of metformin action specifically for breast cancer therapy and overcoming the resistance; also discusses preclinical and ongoing and completed clinical trials. The existing limitation such as therapeutic dose specifically for cancer treatment, resistance of metformin in breast cancer and organic cation transporters heterogeneity of the drug opens up a new pathway for improved understanding and successful application as repurposed effective chemotherapeutics for breast cancer. However, much more additional research is needed to confirm the accurate efficacy of metformin treatment for prevention of cancer and its recurrence.

PEERS ALLEY MEDIA

Title: KAPS-biomarker for early diagnosis of prostate cancer

Kailash C. Chadha | **Roswell Park Comprehensive Cancer Center, USA**

Abstract: Prostate cancer (CaP) is the most common non-skin cancer in men and third most common cause of cancer deaths in men. Black men experience a higher burden of incidence and mortality from CaP compared to White men. The Prostate-Specific Antigen (PSA) test, a commonly used biomarker for early diagnosis and management of CaP, cannot alone accurately predict the presence of CaP, its aggressiveness, or the risk of post-treatment recurrence. The widespread use of PSA testing in CaP screening is controversial partially because patients with benign enlargement of the prostate often have elevated levels of PSA and many men with diagnosed CaP have a normal PSA. Consequently, a search for more effective prostate tumor biomarkers is overdue. Our studies thus far show that concurrent measurements of the levels of serum cytokines such as IL-8, TNF-α, and sTNF-R1 (KAPS biomarker) provide a significant advantage as a CaP biomarker over PSA measurements alone in differentiating men with CaP from men without CaP. Our working hypothesis is that both Black and White men with CaP have altered circulating levels of KAPS biomarker compared to men without CaP. Further, the extent to which these levels are altered will vary according to CaP risk factors and can be used as a tool to improve the early detection of CaP and CaP treatment decision-making. We tested our hypothesis in a retrospective study of men with elevated PSA but a negative prostate biopsy, patients diagnosed with localized prostate cancer and patients with castration resistant CaP (CRPC). The predictive accuracy of the markers was described using receiver operating characteristic (ROC) curves. In our analysis, AUC values greater than 0.8 were considered as useful in predicting CaP outcomes for individual patients. All the comparisons for KAPS biomarker were statistically significant at the $p<0.05$ level. The AUC for each of marker alone was statistically superior to PSA alone ($p<0.01$ for each pairwise comparison). Each of the KAPS-marker combination AUCs was significantly better than PSA alone ($p<0.01$ for all), but not statistically different from each other. Combining TNF-α with PSA resulted in a 3.0-fold decrease in the PSA-Alone False Positive Fraction (FPF), and a 3.7-fold decrease in the PSA- Alone False Negative Fraction (FNF). The PSA+sTNFR1 combination had a 5.9-fold decrease in the FPF, and a 2.5-fold decrease in FNF. Ability of KAPS-biomarker was also effective at distinguishing between localized CaP and metastatic CaP patients. AUC results (with 95% confidence intervals) for additive combinations of these biomarkers will also be discussed. The best predictor of localized CaP vs. metastatic CaP was KAPS combined with PSA 0.999 (0.998 to 1.000). Due to the reported significant racial differences in the diagnoses of and mortality from CaP, future CaP biomarker studies should include a racially diverse sample of men, especially Black men.

FEATURED TALKS

PEERS ALLEY MEDIA

Title: Wnt5A modulates integrin expression in a receptor-dependent manner and promotes tumorigenesis of ovarian cancer cells

Ghamartaj Hossein | **University of Tehran, Tehran, Iran.**

Abstract: Wnt5A signals through various receptors that confer versatile biological functions. Here, Wnt5A overexpressing human ovarian SKOV-3 cells were used and the ability of multicellular aggregates (MCAs) formation, cell proliferation, integrin expression levels, migration, and invasion were further assessed in the presence or absence of siRNA Wnt5A or Box5 as an antagonist of Wnt5A/FZD-5 signaling pathway. Wnt5A overexpression reverts mesenchymal phenotype of SKOV-3 cells to an epithelial-like morphology, leading to increased cell proliferation and MCAs formation. Addressing the molecular mechanisms, we observed that Wnt5A regulates differently the expression of its receptors leading to significant upregulation of Frizzled (FZD)-2 and -5, while FZD-4, ROR-1, and ROR-2 were significantly down-regulated in our model. Additionally, there was an increase of fibronectin and laminin-binding integrins α5β1, αvβ6 and α3β1 integrins, accompanied by activation of focal adhesion kinase. Accordingly, a positive correlation between Wnt5A and ITGB6, ITGA5 and ITGAV in human serous ovarian cancer specimens supports our in vitro data. Moreover, Wnt5A-overexpressing tumor xenografts showed increased tumor growth. In summary, we hypothesize that Wnt5A/FZD-5 signaling pathway is involved in ovarian cancer cell proliferation and tumor growth through integrin modulation.

PEERS ALLEY MEDIA

Title: R-CHOP-Associated Graves' Hyperthyroidism

TD Hoang | **Walter Reed National Military Medical Center, Bethesda, MD, USA**

Background: Radiation-induced thyroid dysfunction following oncologic treatment is not uncommon, however limited literature data has been found on patients that underwent chemotherapy only. A change in thyrometabolic autoimmune status is also a rare entity.

Objectives: We present a case of newly diagnosed Graves' thyrotoxicosis following a successful R-CHOP (Rituximab, Cyclophospha-mide, Doxorubicine, Vincristine and Prednisone) treatment in a patient with concurrent ab-dominal and thyroid diffuse large B-cell lymphoma (DLBCL).

Case Presentation/ Results: A 66-year-old female with a history of Hashimoto's thyroiditis and stage IVE DLBCL, presented with new onset of thyrotoxicosis. Following chemotherapy, PET CT showed resolution of FDG-avid thyroid nodule as well as no evidence of the thyroid mass on repeat ultrasound. Her thyroid function also normalized. During her follow-up visit, patient reported significant unintentional weight loss and persistent fatigue over the past couple months. Repeat laboratory evaluation revealed TSH 0.005 mIU/mL, FT4 6.73 ng/dL and thyroid stimulating immunoglobulin (TSI) 535 (ref <140%). She was started on methimazole followed by radioactive iodine therapy. This unique case of Graves' disease following R-CHOP treatment in patients with known Hashimoto's and thyroid lymphoma is one of the first to be reported in the literature.

Conclusion: The swing of pendulum from Hashimoto's to Graves' disease is very uncommon. As clinicians, we need to continue monitoring for clinical and biochemical thyroid dysfunction in this subset of population.

PEERS ALLEY MEDIA

Title: Reactive Oxygen Species Mediate Isoalantolactone-Induced Apoptosis in Human Prostate Cancer Cells

Mahadev Malhi | **University of Karachi, Karachi, Pakistan**

Abstract: Isoalantolactone, a medicinal plant-derived natural compound, is known to induce apoptosis in various cancer cell lines. However, its effect on apoptosis in prostate cancer cells has not been addressed. Thus, we examined the effects of isoalantolactone on prostate cancer cells. It was found that isoalantolactone inhibits growth of both androgen-sensitive (LNCaP) as well as androgen-independent (PC3 and DU-145) prostate cancer cells in a dose-dependent manner. Furthermore, our results indicate that isoalantolactone-induced apoptosis in prostate cancer PC3 cells is associated with the generation of ROS and dissipation of mitochondrial membrane potential (Δψm). In addition, isoalantolactone triggers apoptosis in prostate cancer cells via up-regulation of Bax, down-regulation of Bcl-2, survivin, and significant activation of caspase-3. Isoalantolactone-induced apoptosis is markedly abrogated when the cells were pretreated with N-acetylcysteine (NAC), a specific ROS inhibitor, suggesting that the apoptosis-inducing effect of isoalantolactone in prostate cancer cells is mediated by reactive oxygen species. These findings indicate that isoalantolactone induces reactive oxygen species-dependent apoptosis in prostate cancer cells via a novel mechanism involving inhibition of survivin and provide the rationale for further in vivo and preclinical investigation of isoalantolactone against human prostate cancer.

PEERS ALLEY MEDIA

Title: An Artificial Nucleoside That Simultaneously Detects and Combats Drug Resistance to Doxorubicin

Anthony J Berdis | **Cleveland State University, Cleveland, OH, USA**

Abstract: Doxorubicin is a DNA damaging agent used to treat hematological and solid cancers. Resistance to doxorubicin occurs through defects in DNA repair coupled with an increase in translesion DNA synthesis activity which allows unrepaired DNA lesions to be misreplicated. This study tests if inhibiting translesion DNA synthesis can increase the overall efficacy of doxorubicin. Toward this goal, *ex vivo* studies were performed treating different acute lymphoblastic leukemia cell lines with doxorubicin in the absence and presence of an artificial nucleoside analog that efficiently and selectively inhibits translesion DNA synthesis. Flow cytometry experiments demonstrate that combining doxorubicin and artificial nucleoside generates a synergistic increase in late stage apoptosis compared to treatment either drug used individually. The magnitude of this cell killing effect correlates well (r =-0.7) with expression of TdT, a specialized DNA polymerase involved in translesion DNA synthesis. Cell-cycle experiments demonstrate that this combination induces an S-phase block with a concomitant increase in apoptosis. This enhancement is clinically important as it could reduce the risk of potential side effects caused by the DNA damaging agent by lowering acute and cumulative doses of doxorubicin.

FEATURED TALKS

PEERS ALLEY MEDIA

Title: The Role of EMT in Driving Stromal Density related Breast Cancer Relapse

Andrew Redfern | **University of Western Australia, Perth, WA, Australia, 6009**

Scope: Epithelial Mesenchymal Transition (EMT) involves cell transition from a differentiated epithelial to a less differentiated mesenchymal phenotype. Mammographic breast density (MBD) is the proportion of high opacity area on a mammogram. EMT in cancer cell lines and animals is linked to chemoresistance. High MBD has also been shown to correlate with lower neoadjuvant chemotherapy (NAC) responses in breast cancer patients.

Objectives: We explore whether poor patient survival after NAC is linked to EMT and/or high MBD, examine whether inferior outcomes in high MBD cases are driven by EMT, and ascertain the transcriptional molecular drivers of EMT.

Methods Used: EMT presence and driver transcription factors were assessed by duel immunohistochemical staining for cytokeratin 19 and vimentin plus Twist-1, Snail and Slug in pre- and post-NAC tissue sections. EMT transcription factors were also assessed by nanostring assay. MBD was assessed on contralateral mammograms from time of diagnosis.

Results: In a NAC-treated pilot cohort of locally advanced BrCas, development of EMT correlated with significantly higher mortality (78 v 25%, p=0.03). In a subsequent 240-patient cohort MBD higher percent breast density correlated with higher relapse rate (35 v 22%. p=0.05). EMT induction is being assessed and correlated with both breast density and outcome in this second cohort. In 50 patients within the second cohort, all EMT-TFs measured were numerically more strongly induced in relapsing patients, the change reaching significance for Snail-3 (OR=1.8, p=0.04) and borderline significance for TWIST-1 (OR=2.4, p=0.08). Validation of links between Snail-3 and Twist-1 protein expression with EMT in the full 240 patient cohort is underway.

Conclusion: Both high MBD and EMT correlate with chemoresistance with a potential causative role for EMT in high MBD-related relapse being explored. Specific EMT-TFs are implicated, targeting of which could attenuate chemoresistance.

PEERS ALLEY MEDIA

Title: WWOX Possesses N-Terminal Cell Surface-Exposed Epitopes WWOX7-21 and WWOX7-11 for Signaling Cancer Growth Suppression and Prevention In Vivo

Ganesan Nagarajan | **King Faisal University, Al Hofuf 31982, Saudi Arabia**

Abstract: Membrane hyaluronidase Hyal-2 supports cancer cell growth. Inhibition of Hyal-2 by specific antibody against Hyal-2 or pY216-Hyal-2 leads to cancer growth suppression and prevention in vivo. By immunoelectron microscopy, tumor suppressor WWOX is shown to be anchored, in part, in the cell membrane by Hyal-2. Alternatively, WWOX undergoes self-polymerization and localizes in the cell membrane. Proapoptotic pY33-WWOX binds Hyal-2, and TGF-_ induces internalization of the pY33 WWOX/Hyal-2 complex to the nucleus for causing cell death. In contrast, when pY33 is downregulated and pS14 upregulated in WWOX, pS14-WWOX supports cancer growth in vivo. Here, we investigated whether membrane WWOX receives extracellular signals via surface-exposed epitopes, especially at the S14 area, that signals for cancer growth suppression and prevention. By using a simulated 3-dimentional structure and generated specific antibodies, WWOX epitopes were determined at amino acid #7 to 21 and #286 to 299. Synthetic WWOX7-21 peptide, or truncation to 5-amino acid WWOX7-11, significantly suppressed and prevented the growth and metastasis of melanoma and skin cancer cells in mice. Time-lapse microscopy revealed that WWOX7-21 peptide potently enhanced the explosion and death of 4T1 breast cancer stem cell spheres by ceritinib. This is due to rapid upregulation of proapoptotic pY33-WWOX, downregulation of prosurvival pERK, prompt increases in Ca2+ influx, and disruption of the IkB_/WWOX/ERK prosurvival signaling. In contrast, pS14-WWOX7-21 peptide dramatically increased cancer growth in vivo and protected cancer cells from ceritinib-mediated apoptosis in vitro, due to a prolonged ERK phosphorylation. Further, specific antibody against pS14-WWOX significantly enhanced the ceritinib-induced apoptosis. Together, the N-terminal epitopes WWOX7-21 and WWOX7-11 are potent in blocking cancer growth in vivo. WWOX7-21 and WWOX7-11 peptides and pS14-WWOX antibody are of therapeutic values in suppressing and preventing cancer growth in vivo.

PEERS ALLEY MEDIA

Title: Breast cancer in women and body mass index. Use L-Carnitine in prediction and outcomes of the disease

Hojouj Mohammad I M | **Dnipropetrovsk medical academy of Health Ministry of Ukraine**

Abstract: The incidence of breast cancer in the world in general and in Ukraine in particular is growing. In 2018, in Ukraine the incidence reached 16 percent of female population.According to the Ministry of Health in Ukraine 26% of the female population for 2018 was overweight or obese. There is a strong biologic basis for an association of obesity with poor breast cancer outcomes. Obesity - a chronic metabolic character, which is the result of the interaction of the endogenous factors, environmental conditions and lifestyle. Endogenous factors could be considered a violation of the genetic and hormonal balance. The external conditions include irregular rhythm nutrition, use of substandard products. By disorders include sedentary lifestyles.Obesity is the first risk factor for metabolic syndrome, diabetes type II, cardiovascular diseases and some forms of cancer, including breast cancer. Since overweight is a risk factor for breast cancer, there is a reason to believe that among patients with breast cancer the percentage of obese women is higher than in the population. The risk of breast cancer in postmenopausal women by 30% more than in premenopausal, women with obesity - 50%. Furthermore it was proven that obesity is associated with poor prognosis in patients with breast cancer, regardless of menopausal status. The leading role in achieving long-term results of treatment with systemic methods, such as chemotherapy or hormone therapy. The purpose of systemic therapy is the eradication of micrometastases in the case of radical surgical treatment or reduction of tumor load in case of treatment of locally advanced or metastatic cancer. The calculation of the dose of chemotherapy conducted mainly in the area of the body. Thus to avoid complications associated with overdose of chemotherapy, the standard practice is to calculate the dose of 2.0 m2 patients whose body area more than this. Preparations hormonal action used in standard dosage for an adult without constitutional features. Along with this recent literature there is information that women are overweight effectiveness of systemic treatments may be lower than expected.

PEERS ALLEY MEDIA

Title: Radiofrequency assisted pancreaticoduodenectomy for palliative surgical resection of locally advanced pancreatic adenocarcinoma

Madhava Pai | **Imperial College London, London, UK**

Background: Curative resection rate (R0) in pancreaticoduodenectomy(PD) ranges from 15% to 87% in spight of careful patient selection and improvement in preoperative staging investigations. Here we describe a new palliative approach for pancreaticoduodenectomy using a radiofrequency (RF) energy device to ablate tumour *in situ* in select patients undergoing resections for locally advanced pancreatic ductal adenocarcinoma where vascular reconstruction was not feasible.

Method: Six patients with suspected tumor infiltration and where vascular reconstruction was not warranted underwent RF assisted PD for locally advanced pancreatic ductal adenocarcinoma. Radiofrequency was applied across the tumour vertically 5-10 mm from the edge of the mesenteric and portal veins. Following ablation, the duodenum and the head of pancreas were removed after knife excision along the ablated line. The remaining ablated tissue was resected in 4 patients and in two it was left *in situ* attached to the vessel.

Results: The patients had a median age of 73 years (range 65–79 years) and a body mass index (BMI) of 27.7 ± 4.2 kg/m2.There was neither postoperative mortality nor significant morbidity (T**able 1**). Each time the ablation lasted less than 15 minutes. Following RF ablation it was observed that the tumour remnant attached to the vessel had shrunk significantly. In four patients this allowed easier separation and dissection of the ablated tumour from the adherent vessel leading to R1 resection. In the other two patients, the ablated tumour did not separate from vessel due to true tumour invasion and patients had an R2 resection. The ablated remnant part of the tumour was left *in situ.*

Conclusion: Whenever PD with R0 resection cannot be achieved in select group of patients not suitable for vascular resection, this new palliative procedure could be considered in order to facilitate resection and enable maximum destruction in remnant tumours.

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PEERS ALLEY MEDIA

Title: Isolated Breast Relapse after Metastatic Alveolar Rhabdomyosarcoma in a Young Premenarcheal Girl: What Could Have Been Done?

Raymond N. HADDAD | **Hotel Dieu de France University Medical Center, Lebanon**

Abstract: Alveolar rhabdomyosarcoma (RMS) is one of the most common pediatric soft-tissue neoplasms. Breast involvement either as primary tumor or metastasis is extremely rare. Herein, we report a case of primary limb alveolar RMS with breast metastases in a young premenarcheal girl that relapsed only to the metastatic breast site after achieving complete response. Accordingly, we believe that investigations of the mammary glands should be part of the routine diagnostic workup in adolescent females with RMS. Local therapeutic measures to control breast disease, including surgery or radiotherapy has to be considered for better prognosis. Newer radiation modalities aiming at reducing side effects should be developed.

FEATURED TALKS

PEERS ALLEY MEDIA

Title: Demonstration of anti-tumour bystander killing with prodrug-preloaded suicide gene-engineered tumour cells: a potential improvement for cancer therapeutics

Jehad Zweiri | **University of Liverpool, UK**

Background: Therapeutic approaches for cancer rely on careful consideration of finding the optimal way of delivering the pro-drug for cellular-based cancer treatment. Cell lines and cell cultures have been used in these studies to compare the in vitro and in vivo efficacy of autologous vs. allogeneic tumour cellular gene therapy. Here we have investigated and are reporting for the first time the effect of prodrug ganciclovir (GCV)-preloading (pre-treatment) in suicide gene therapy of cancer.

Methods: This study examines the effect of GCV-preloading (pre-treatment) on a range of tumour cell lines in conjunction with suicide gene therapy of cancer. To determine the efficacy of this modality, a series of in vitro and in vivo experiments were conducted using genetically modified and unmodified tumour cell lines.

Results: Following co-culture of herpes simplex virus thymidine kinase (HSV-TK) modified tumour cells and unmodified tumour cells both in vitro and in vivo, GCV-preloading (pre-treatment) of TK-modified human and mouse mesothelioma cells and ovarian tumour cells allowed them to mediate efficiently bystander killing of neighbouring unmodified tumour cells in vitro. In contrast, GCV-preloading of TK-modified human and mouse mesothelioma cells and ovarian tumour cells abolished their in vivo ability to induce bystander killing of unmodified tumour cells, although there was some tumour regression compared to control groups but this was not statistically significant.
These results suggest that preloading TK modified tumour cells with GCV needs further study to define the most effective strategy for an in vivo application to retain their bystander killing potential after exposure to lethal doses of GCV in vitro.

Conclusions: This study highlights the promising possibility of improving the efficacy of pro-drug system to prevent any damage to the immune system and enhancing this type of suicide gene therapy of cancer, as well as the need for further studies to explore the discrepancies between in vitro and in vivo results.

PEERS ALLEY MEDIA

Title: Trace Element Analysis of Cancerous and Non-cancerous Breast Tissues of African Women in Southwest Nigeria using particle inducing X-ray emission technique

D.O.Olaiya | **Obafemi Awolowo University, Ile-Ife.State of Osun, Nigeria**

Abstract: In this study, we applied particle-induced X-ray emission (PIXE) spectroscopy to investigate the levels of trace elements in breast tissues and whole blood (cancerous and non-cancerous) of selected African women in Ile-Ife, Southwest Nigeria. Freeze-dried and homogenized specimens obtained through mastectomy from clinically diagnosed patients were made into 11-mm-diameter pellets. The pellets were irradiated with 2.5MeV proton beam energy from a 1.7MV 5SDH Tandem accelerator. The PIXE analytical system was calibrated with certified reference matrices of Bovine Liver and Animal Blood: NIST 1577a and IAEA-A-13, respectively. A total of 23 elements: Na, K, Ca, Cl, S,Al, P, Si, Zn, Pb, Br, Rb, Zr, Se, Sr, Mn, V, Ti, Cu, Fe, Ni, Cr, and Mg were detected. The results indicated that the levels were within 0.9-5288 and 0.6-2320ppm in breast tissues and 0.3-17228 and 2.0-2475ppm in the whole blood of cancerous and non-cancerous subjects, respectively. At the .05 level of significance, significant differences exist between these levels in the cancerous and non-cancerous breast tissues (t=0.008) as well as the whole blood (t=0.041). The results gave the baseline concentration of the observed trace elements in the normal and malignant subjects and indicated PIXE as a powerful tool for such investigation.

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