Under the Auspices of Minister of Public Health
HE Mr. Wael Abou Faour

The Breast Center of Excellence – Naef K. Basile Cancer Institute,
the Clinical and Professional Development Center (CPDC)
and the Continuing Medical Education (CME) Office at the

American University of Beirut Medical Center (AUBMC)
Present the

4th Annual Beirut Breast Cancer Conference
(Beirut BCC4)

Advances in Breast Cancer Management and Updates
February 11-13, 2016
Gefinor Rotana Hotel, Near AUB, Beirut, Lebanon
Message from the Activity Director

It is my great pleasure to welcome you to the Fourth Annual Beirut Breast Cancer Conference BBCC-4, organized by the Breast Center of Excellence, Naef K, Basile Cancer Institute, American University of Beirut Medical Center (AUBMC).

We are pleased to offer you a rich multidisciplinary program that includes most up-to-date diagnostic and treatment information for the management of patients with breast cancer. BBCC-4 scientific program is designed for Medical Oncologists, Surgeons, Radiation Oncologists, Radiologists, Pathologists, Gynecologists, other interested physicians, Nurses, Residents, Fellows, and Medical Students. BBCC-4 includes educational sessions as well as research poster and oral presentation sessions. In an effort to encourage local cancer research, prizes will be awarded to the selected Best Abstracts and Best Posters.

Like every year, we assembled a great panel of speakers and experts to deliver 2014 updates on the management of patients with breast cancer and to have multidisciplinary tumor board sessions. We will present CME-lectures, highlights and updates from major oncology meetings, including St. Gallen, EBCC, ASCO, ESMO, ABC, San Antonio, and the published literature. We will hold two case discussion sessions, and several non-CME satellite symposia. We will also continue the tradition of special scientific talks relevant to both physicians and nurses, and CNE sessions. This year, we add a workshop for NGOs working in the field of awareness and fundraising, and a Pharmacy Workshop on chemotherapy.

We are pleased that AUB Breast cancer Conferences (AUB BCC 1-3) has now evolved into Beirut Breast Cancer Conference BBCC-4, with the support of the Lebanese Order of Physicians and Medical Scientific Societies, Lebanese Order of Nursing, Lebanese Order of Pharmacists, Lebanese Society of Medical Oncology, Lebanese Society of General Surgery and other Societies, NGOs and Advocacy Groups, as well as the Arab medical Association Against Cancer (AMAAC).

Finally, on behalf of BBCC-4 Scientific Committee and the CME Office at AUBMC, I wish you a fruitful meeting and a wonderful stay in Beirut and Lebanon.

Nagi S. El Saghir, MD, FACP
Chairperson
BBCC-4
General Information

Program Overview
The Breast Center of Excellence of the Naef K. Basile Cancer Institute at the American University of Beirut Medical Center (AUBMC) organizes its third Annual Breast Cancer Conference, Beirut BCC4, bringing together the Lebanese Order of Physicians, Lebanese Order of Nurses, Lebanese Order of Pharmacists, various Lebanese and Arab medical associations and non-governmental organizations, and Lebanese and International experts collaborating together in the fight against breast cancer. The program includes updates on breast cancer patient assessment and treatment planning, management of chemotherapy side effects, breast conservative surgery, breast reconstruction, contralateral prophylactic mastectomy, new advances in chemotherapy, anti-HER2 targeted therapy and hormonal therapy and ovarian function suppression, as well as new research abstracts, as well as two pharmacy and NGO workshops.

Objectives
Lebanese and International experts will share knowledge and lessons learnt, discuss novel advances in screening, chemoprevention and loco-regional assessment, patient advocacy and support groups, as well as the latest findings in breast cancer management on surgery, radiation, and systemic therapy.

Target Audience
This annual scientific meeting has been designed for physicians, researchers, scientists, physicians-in-training and medical students, as well as nurses patient advocates. Breast cancer basic and clinical researchers, policymakers, and research promoters/funders are also encouraged to attend.

Venue
This symposium is held at the Gefinor Rotana Hotel, Beirut, Lebanon.

Accreditation
This symposium complies with the Lebanese Order of Physicians Continuing Medical Education and the ANCC guidelines.

American University of Beirut Medical Center is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center’s Commission on Accreditation.

The planning committee and presenters declare no conflict of interest, including financial interest in product or company presented, direct research support, or other form of potential bias.
### Scientific Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jaber Abbas, MD</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Hazem Assi, MD</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Hamdy Azim, MD</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Rebecca El Asmar, RN, MSN</td>
<td>RN, MSN</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Nagi S. El Saghir, MD (Chair)</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Fady Geara, MD</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Lara Nassar, MD</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Eman Sbaity, MD</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
</tbody>
</table>

### Abstract Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazem Assi, MD</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Hamdy Azim, MD</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Rebecca El Asmar, RN, MSN</td>
<td>RN, MSN</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Nagi S. El Saghir, MD (Chair)</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Fadi Farhat, MD</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Fady Geara, MD, PhD</td>
<td>MD, PhD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Marwan Ghosn, MD, MHHM</td>
<td>MD, MHHM</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Lara Nassar, MD</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Eman Sbaity, MD</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
<tr>
<td>Arafat Tfayli, MD</td>
<td>MD</td>
<td>Department of Internal Medicine</td>
</tr>
</tbody>
</table>

### Additional Information

- **Matti Aapro, MD**
  - Dean
  - Multidisciplinary Oncology Institute
  - Genolier, Switzerland

- **Jabber Abbas, MD**
  - Clinical Associate Professor
  - General Surgery
  - Department of Surgery
  - American University of Beirut Medical Center
  - Beirut, Lebanon

- **Fatima Ismail, RPh**
  - Operational Pharmacist
  - Department of Pharmacy
  - American University of Beirut Medical Center
  - Beirut, Lebanon

- **Sanaa Al-Sukhun, MD, MSc**
  - Assistant Professor
  - Oncology/Hematology
  - King Saud bin Abdulaziz University for Health Sciences
  - Riyadh, KSA

- **Hikmat Abdel-Razeq, MD**
  - Chairman
  - Department of Internal Medicine
  - Deputy Director General
  - King Hussein Cancer Center
  - Amman, Jordan

- **Salam Abdul Wahed, RPh**
  - Sterile Preparations Senior Pharmacist
  - Department of Pharmacy
  - American University of Beirut Medical Center
  - Beirut, Lebanon

- **Omalkhair Abulkhair, MD**
  - Assistant Professor
  - Oncology/Hematology
  - King Saud bin Abdulaziz University for Health Sciences
  - Riyadh, KSA

- **Mahmoud ElTamer, MD**
  - Dean
  - Multidisciplinary Oncology Institute
  - Genolier, Switzerland
<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>President of Jordanian Oncology Society Consultant</td>
<td>Medical Oncology/Hematology University of Jordan Amman, Jordan</td>
</tr>
<tr>
<td>Nada Alwan, MD, PhD</td>
<td>Professor Department of Pathology Director, National Cancer Research Center Baghdad University Baghdad, Iraq</td>
</tr>
<tr>
<td>Bechara Atiyeh, MD, FACS</td>
<td>Clinical Professor Plastic &amp; Reconstructive Surgery American University of Beirut Medical Center Beirut, Lebanon</td>
</tr>
<tr>
<td>Hamdy A. Azim, MD</td>
<td>Chairman, Professor Clinical Oncology Cairo University Cairo, Egypt</td>
</tr>
<tr>
<td>Ghina Berjawi, MD</td>
<td>Associate Professor Women’s Imaging Diagnostic Radiology American University of Beirut Medical Center Beirut, Lebanon</td>
</tr>
<tr>
<td>Fouad Boulos, MD</td>
<td>Assistant Professor Pathology and Laboratory Medicine American University of Beirut Medical Center Beirut, Lebanon</td>
</tr>
<tr>
<td>Simone Karam, RN</td>
<td>Attending Surgeon, Breast Service Department of Surgery, MSKCC Professor of Surgery, Weill Cornell Medical College Memorial Sloan-Kettering Cancer Center Evelyn H. Lauder Breast Center New York, USA</td>
</tr>
<tr>
<td>Fadi Farhat, MD</td>
<td>Head Haematology/Oncology Division Hammoud Hospital Saida, Lebanon</td>
</tr>
<tr>
<td>Fady Garea, MD</td>
<td>Professor and Chairman Department of Radiation Oncology Founding Director The Naef K Basile Cancer Institute (2007-2012) American University of Beirut Medical Center Beirut, Lebanon</td>
</tr>
<tr>
<td>Marwan Ghosn, MD, MHHM</td>
<td>Professor and Chairman, Hematology-Oncology Department, Faculty of Medicine, Saint-Joseph University Beirut, Lebanon</td>
</tr>
<tr>
<td>Mohamad Haidar, MD</td>
<td>Assistant Professor Department of Radiation Oncology American University of Beirut Medical Center Beirut, Lebanon</td>
</tr>
<tr>
<td>Faek Jamali, MD</td>
<td>Associate Professor of Clinical Surgery Department of Surgery American University of Beirut Medical Center Beirut, Lebanon</td>
</tr>
<tr>
<td>Olivia Pagani, MD</td>
<td></td>
</tr>
<tr>
<td>Department of Radiation Oncology</td>
<td>Clinical Director</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>American University of Beirut Medical Center</td>
<td>Breast Cancer Unit</td>
</tr>
<tr>
<td>Beirut, Lebanon</td>
<td>Cantonal Hospital</td>
</tr>
<tr>
<td></td>
<td>Lugano, Switzerland</td>
</tr>
<tr>
<td>Ghada Keserwani, RN</td>
<td></td>
</tr>
<tr>
<td>Clinical Case Management</td>
<td></td>
</tr>
<tr>
<td>Bellevue Medical Center</td>
<td></td>
</tr>
<tr>
<td>Mansourieh, Lebanon</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghina Khatib, RN</td>
<td></td>
</tr>
<tr>
<td>Clinical Educator</td>
<td></td>
</tr>
<tr>
<td>Hariri School of Nursing</td>
<td></td>
</tr>
<tr>
<td>American University of Beirut Medical Center</td>
<td></td>
</tr>
<tr>
<td>Beirut, Lebanon</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Nagi Khouri, MD</td>
<td></td>
</tr>
<tr>
<td>Carol Ann Flanagan Professor in Breast Imaging</td>
<td></td>
</tr>
<tr>
<td>Associate Professor of Radiology and Oncology</td>
<td></td>
</tr>
<tr>
<td>Johns Hopkins</td>
<td></td>
</tr>
<tr>
<td>Baltimore, USA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Mahmoud Masri, MD, FRCS</td>
<td></td>
</tr>
<tr>
<td>Chairman</td>
<td></td>
</tr>
<tr>
<td>Department of Surgery</td>
<td></td>
</tr>
<tr>
<td>King Hussein Cancer Center</td>
<td></td>
</tr>
<tr>
<td>Amman, Jordan</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Lara Nassar, MD</td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td></td>
</tr>
<tr>
<td>Department of Radiation Oncology</td>
<td></td>
</tr>
<tr>
<td>American University of Beirut Medical Center</td>
<td></td>
</tr>
<tr>
<td>Beirut, Lebanon</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhea Saad, RP</td>
<td></td>
</tr>
<tr>
<td>Senior Attending Clinical Pharmacist</td>
<td></td>
</tr>
<tr>
<td>Department of Pharmacy</td>
<td></td>
</tr>
<tr>
<td>American University of Beirut Medical Center</td>
<td></td>
</tr>
<tr>
<td>Beirut, Lebanon</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Eman Sbeity, MD</td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td></td>
</tr>
<tr>
<td>Department of Surgery</td>
<td></td>
</tr>
<tr>
<td>American University of Beirut Medical Center</td>
<td></td>
</tr>
<tr>
<td>Beirut, Lebanon</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Ali Shamseddine, MD</td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Department of Internal Medicine</td>
<td></td>
</tr>
<tr>
<td>American University of Beirut Medical Center</td>
<td></td>
</tr>
<tr>
<td>Beirut, Lebanon</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Latifa Shihab, RN</td>
<td></td>
</tr>
<tr>
<td>RN Short Stay Unit</td>
<td></td>
</tr>
<tr>
<td>American University of Beirut Medical Center</td>
<td></td>
</tr>
<tr>
<td>Beirut, Lebanon</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Maha Wazne, RPh</td>
<td></td>
</tr>
<tr>
<td>Senior Attending Clinical Pharmacist</td>
<td></td>
</tr>
<tr>
<td>Department of Pharmacy</td>
<td></td>
</tr>
<tr>
<td>American University of Beirut Medical Center</td>
<td></td>
</tr>
<tr>
<td>Beirut, Lebanon</td>
<td></td>
</tr>
</tbody>
</table>
Thursday, February 11, 2016
13:00pm: B-BCC4 Registration Open

13:25 Welcome and Opening: Nagi El Saghir, MD, FACP

13:30-15:45: Didactic Session I: Advancing Cancer Research in Arab Countries
Moderators: Nagi El Saghir, MD, Marwan Ghosn, MD

13:30-13:45 Impact of Cancer Registries on Research in Arab Countries
Ali Shamseddine, MD

13:45-14:00 Breast Cancer Genetic Mutations in Arab Countries
Nagi El-Saghir, MD

14:00-14:15 WHO/EMRO Regional Comparative Breast Cancer Research Project: Where Do We Stand?
Nada Alwan, MD

14:15-14:30 New Drugs and Clinical Trials in the Middle East
Fadi Farhat, MD

14:30-14:45 Research in Breast Surgery in the Middle East
Mahmoud Al-Masri, MD

14:45-15:00 Setups and Research in Breast Radiation Therapy in the Middle East
Fady Geara, MD

15:00-15:15 AMCI and Cancer Clinical Trials in Africa and Middle East
Marwan Ghosn, MD

15:15-15:30 Debate on Moving Forward with Clinical Research in Arab Countries
Panel

15:30-16:00 Coffee Break
16:00-17:00: Didactic Session II: Updates in Breast Cancer Upfront Management I

*Moderators: Sami Faddoul, MD, Assem Hajj, MD, Khaled Ibrahim, MD*

16:00-16:20 Breast MRI: What’s New in Early & Locally Advanced Breast Cancer?
Ghina Berjawi, MD

16:20-16:40 Breast and Axilla Conserving Surgery: What’s New?
Mahmoud El-Tamer, MD

16:40-17:00 Breast Neo-adjuvant Therapy: For which stage and which patient?
Sanaa Al-Sukhn, MD

17:00-18:00 OPENING CEREMONY & Debate on Cancer Control in Lebanon

*Moderator Mr. Neshan Haroutiounian*

Dr. Nagi El Saghir (President, Beirut BCC4)
Dr. Hassan El-Solh (Director, NKBCI - AUBMC)
Dr. Joseph Makdessi (President, LSMO)
Dr. Maroun Abou Jaoude (President, LSGS)
Dr. Sami Khatib (President, AMAAC)
Dr. Nuhad Dumit (President, ONL)
Dr. Georges Sili (President, LO Ph)
Dr. Antoine Boustani (President, LOP)
HE Mr. Wael Abou Faour (Minister of Health)

18:00 – 19:00 BBCC-4 Reception
Friday, February 12, 2016

07:30 Registration

08:30 - 09:45: Didactic Session III: Medico-Nursing-Advocacy Breast Oncology: Overview and Patient Management
Moderators: Ms. Mona Barakat, RN (Hammoud), Salma Geara, RN (HDF), Sawsan Halabi Ezzeddine, RN (MGH), Iman Kouatly, RN (AUBMC), Zeina Koussa, RN (AUBMC)

08:30 - 08:45 Professional development of Oncology Nurses
Ghina Khatib, RN

08:45 - 09:00 Telephone Triaging: Tips and practice
Latifa Shihab, RN

09:00 - 09:15 Management of ulcerated breast lesions
Ghada Keserwani, RN

09:15 - 09:30 Radiation Therapy: Recognizing the Oncology Nurse’s roles
Simonne Karam, RN

09:30 - 09:45 Advances in breast cancer 2015-2016 in brief
Nagi El-Saghir, MD

Participants who attend the „Didactic Session III: Medico-Nursing-Advocacy Breast Oncology: Overview and Patient Management“ will receive 1.25 contact hours

The planning committee and the presenter(s) declare no conflict of interest including financial interest in product or company; direct research support, or other form of potential bias.

American University of Beirut Medical Center Nursing Services Clinical and Professional Development Center is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center’s Commission on Accreditation
09:45 - 10:00  Coffee Break

10:00 – 11:00  Panel Discussion I: Breast Cancer Awareness and Patient Support in Lebanon and Arab Countries

*Moderators: Ms. Jacqueline Chehwan, TV Anchor*

PANEL: Dr. Salim Adib, PHD (AUB Public Health), Walid Ammar, MD (MOPH), Labib Ghulmiyeh, MD (AUBMC), Nuhad Yazbik-Dumit, PhD (ONL), NGOs: Nada Alwan (NCRC-Iraq), Loreen Atwi (WS), Hanan Charara (Ajialona), Nadine Chatila (AUBMC), Mirna Doumit (LAU), Rima Dandashi (MJF), Anne Franjieh (FF), Janane Hanna (BALSAM), Mirna Hoballah (LBCF)

11:00 – 12:30pm: Session IV: New Advances in Imaging and Pathology

*Moderators: Reine Fahed, MD, Fatima Ghandour, MD, and Asaad Mohana, MD*

11:00 - 11:15  Screening mammography: Advances and New Tools

Nagi Khouri, MD

11:15 - 11:30  Update on Breast and Axillary Ultrasound

Lara Nassar, MD

11:30 - 11:45  PET scanning in staging of breast cancer

Mohamad Haidar, MD

11:45 -12:00  ER, PR, HER2, Ki67, AR, genomic profiling and beyond!

Fouad Boulos, MD

12:00- 12:30  Case presentations in breast imaging

Nagi Khouri, MD

12:30-13:00  **Satellite Symposium: Supported by ROCHE (Non-CME):** Innovation for HER protection

13:00- 14:00  LUNCH BREAK
14:00 - 15:15: Session V: Updates in Breast Cancer Therapy
Moderators: Nizar Bitar, MD, Hassan Jaafar, MD, Marcel Massoud, MD, Ghazi Nsouli, MD

14:00 - 14:15 Neo-adjuvant therapy for TNBC
Hikmat Abdel-Razeq, MD

14:15 - 14:30 Neoadjuvant Hormonal Therapy
Omalkhair Aboulkhair, MD

14:30 - 14:45 Neoadjuvant therapy with Dual anti-HER2 therapy for HER2+ disease
Olivia Pagani, MD

14:45 - 15:00 Total versus Partial Mastectomy for Primary Breast Cancer: New Data
Mahmoud Al-Masri, MD

15:00 - 15:15 Bone Health in Breast Cancer Patients: Adjuvant and Metastatic
Marwan Ghosn, MD

15:15 - 15:45 Coffee Break

15:45 - 17:00: PANEL Session II: Multidisciplinary Tumor Boards -1
Case Discussions: Georges Aftimos, MD, Mahmoud El-Tamer, MD, Youssef El-Zein, MD, Sami Faddoul, MD, Fadi Farhat, MD, Faek Jamali, MD, Nagi Khouri, MD, Elie Nasr, MD, Olivia Pagani, MD, Ahmad Saadeddin, MD, Arafat Tfayli, MD

17:00-18:00 Satellite Symposium: Supported by Astra Zeneca (Non-CME): Updates & Guidelines for 1st & 2nd lines Hormonal therapy for post-menopausal patients
Saturday, February 13, 2016

Rotana A – C Level

09:00 - 10:45: Session VI: Major advances in Breast Cancer Surgery  
**Moderators:** Ghassan Abu-Sittah, MD, Negib Geahchan, MD, Nasser Hammoud, MD, Ayman Harake, MD, Mohamad Khalife, MD, Doreid Oweidat, MD

09:00 - 09:20  Optimal management of the axilla  
Faek Jamali, MD

09:20 - 09:40  Nipple saving surgery in breast cancer  
Eman Sbaity, MD

09:40 - 10:00  Oncoplastic techniques in breast cancer surgery  
Jaber Abbas, MD

10:00 - 10:20  Therapeutic reduction mammoplasty: a new technique for partial mastectomy  
Bechara Atiyeh, MD

10:20 - 10:45  Surgery after Neo-adjuvant Therapy  
Mahmoud El-Tamer, MD

10:45 - 11:00  Coffee Break

11:00 - 12:00: Panel Session II: Multidisciplinary Management: Tumor Boards -2  
**Case Discussions:** Matti Aapro, MD, Hazem Assi, MD, David Atallah, MD, Fouad Boulos, MD, Mahmoud El-Tamer, MD, Mohamad Haidar, MD, Khaled Ibrahim, MD, Hassan Jaafar, MD, Imad Kaddoura, MD, Nagi Khouri, MD, Olivia Pagani, MD, Eman Sbaity, MD, Bassem Youssef, MD

12:00-13:00  **Satellite Symposium: Supported by Novartis (Non-CME):** Dual to More Than Double in HR+ Advanced Breast Cancer
13:00-14:00  Lunch break

14:00 - 15:15: Session VII: Monday Morning Clinic: Advances for 2016
Moderators: Marwan Ghosn, MD, Fadi Farhat, MD, Fadi Karak, MD, Ahmad Saadeddin, MD

14:00 - 14:20  Monday Morning Clinic: Adjuvant & Neoadjuvant Hormonal Therapy in 2016
Olivia Pagani, MD

14:20 - 14:40  Monday Morning Clinic: Adjuvant and Neoadjuvant Chemotherapy in 2016
Matti Aapro, MD

14:40 - 15:00  Monday Morning Clinic: ABC3 Guidelines for Advanced Breast Cancer for 2016
Nagi El-Saghir, MD

15:00 - 15:20  Monday Morning Clinic: Glance at Immunotherapy for Breast Cancer in 2016
Hamdy A. Azim, MD

15:20-16:00: Oral abstract presentations Session: Best Posters & Best Oral Presentations prizes:
Moderators: Matti Aapro, MD, Hamdy Azim, MD, Nagi El Saghir, MD, Marwan Ghosn, MD, Olivia Pagani, MD, Eman Sbaity, MD, Arafat Tfayli, MD

15:20 -15:25  Short relative telomere length (RTL) in peripheral blood is associated with breast cancer risk in the Lebanese

15:25-15:30  Molecular Profiling guided treatment in refractory solid tumors: focus in breast cancer patients of a single center

15:30-15:35  Efficacy and safety of Everolimus in hormone positive breast cancer in a developing country: real-life single institutional experience
15:35-15:40 Delay in breast cancer adjuvant chemotherapy: profile of latecomers and potential effect on survival

15:40-15:45 Chemotherapy Extravasation: Guidelines and Practical tips

15:45-15:50 Examining the Drug Approval Process in Lebanon, Egypt, Algeria, and Gulf Arab Countries

15:50-15:55 Prevalence and clinical characteristics of BRCA mutation in an unselected cohort of newly diagnosed Lebanese breast cancer patients

15:55-16:00 Age less than 40 years is an independent predictor of worse prognosis among Lebanese breast cancer patients: Analysis from a prospective cohort

Jade B-R Level
BBCC-4 Workshops

09:30 - 11:00: Oncology Pharmacy Workshop
Moderators: Georges Sili, PharmD, Ulfat Usta, PharmD

09:30 – 09:40 Introduction
Georges Sili, Pharm D

09:40 – 10:00 Improving medication safety of chemotherapy drugs
Maha Wazni, RPh

10:00 – 10:20 Pharmacist's role in counseling
Rhea Saad, RPh

10:20 – 10:40 Updates on safe administration guidelines
Fatima Ismail, RPh

10:40 – 11:00 Basics of aseptic technique
11:00 - 13:00: NGO Workshop
Facilitator: Ziad Hamdan

11:00 – 13:00 NGOs, Patient Advocacy, Campaining and Fundraising
Posters’ Abstracts
Short relative telomere length (RTL) in peripheral blood is associated with breast cancer risk in the Lebanese
Sleiman F¹, Awada Z¹, Nasr R², Tfayli A³, Boustany R⁴, Makoukji J⁴, Zgheib, NK¹

(1) Department of Pharmacology and Toxicology, AUBFM; (2) Department of Anatomy, Cell Biology, and Physiology, AUBFM; (3) Department of Internal Medicine, AUBFM; (4) Department of Biochemistry & Molecular Genetics, AUBFM

*Corresponding author: Nathalie K. Zgheib (nk16@aub.edu.lb)

Descriptive Statement: Relative telomere length that is critical for maintaining genomic stability is significantly shorter in breast cancer patients when compared to non-breast cancer controls.

Background: Telomeres play a critical role in maintaining genomic stability. Previous studies linked relative telomere length (RTL) with several cancer types. However, clinical studies on the association between blood RTL and breast cancer showed inconsistent results. Hence, more studies are required to solve this inconsistency.

Aims: Herein, we aim to address the following three questions: Is RTL in whole blood of breast cancer patients significantly different from that of non-breast cancer female controls? Is RTL altered in breast cancer tissues when compared to normal adjacent tissues? Is RTL in breast cancer tissues congruent with RTL in whole blood and circulating tumor DNA?

Methods: Lebanese breast cancer patients (n=87) of different IDC stages and grades have already been recruited at our institution, the American University of Beirut Medical Center (AUBMC), between 2012 and 2013. Peripheral blood and tissues were collected before treatment initiation and stored at -80°C. In addition, and after signing an informed consent, 501 Lebanese subjects, of whom 328 were females and older than 18 years of age were recruited from Greater Beirut between February and June 2014, and blood was stored. Telomere and single copy gene (human beta-globin) in peripheral blood were amplified by real-time polymerase chain reaction (RT PCR).

Results: RTL in peripheral blood of breast cancer patients was significantly shorter from that of non-breast cancer female controls (Mean RTL ± SD: 0.405 ± 0.099 vs. mean RTL ± SD of 0.93 ± 0.6, \( P = 0.000 \)). Further work is in progress on cancerous and normal adjacent breast tissues, as well as on circulating tumor DNA to detect whether RTL is a biomarker for breast cancer development, severity, and outcome.

Conclusion: This is the first study to show that RTL is significantly shorter in Lebanese breast cancer patients when compared to non-breast cancer Lebanese controls. Analysis is ongoing to adjust for factors such as age, body mass index, known risk factors of breast cancer, smoking status, alcohol consumption, and complete blood count with % neutrophils.

Funding Source: American University of Beirut Faculty of Medicine Medical Practice Plan (AUBFM MPP)
Molecular Profiling guided treatment in refractory solid tumors: focus in breast cancer patients of a single center
Toni IBRAHIM MD, Abir EL AHMADIE MD, Fadi EL KARAK MD, Fadi FARHAT MD, Joseph KATTAN MD, Colette HANNA MD, Anthony SAROUFIM, Lana AL COSTA, Marwan GHOSN MD

Background: A pilot study has shown that comprehensive molecular profiling can be used to find molecular targets in patients with refractory metastatic cancer. In 18 of 66 patients treated with a molecularly guided therapy, the approach resulted in a longer PFS on an MP-suggested regimen than on the prior regimen on which the patient had just experienced progression. Exploratory analysis demonstrated that this PFS ratio correlated with the clinical parameter of overall survival. Recent study in patients with refractory breast cancer showed that tumor profiling resulted in a revision of the original treatment decision for all patients and tumor profiling-based therapy resulted in a clinical benefit in 52% of heavily pretreated patients.

The aim of this study was to retrospectively assess the impact of using molecular profiling to guide treatment choice in patients with rare or refractory cancer focusing on breast cancer in routine clinical practice at a single center in Lebanon.

Method: One hundred one patients with rare or refractory cancer being treated at Hôtel Dieu De France –Saint Joseph University were referred to Caris Life Science for comprehensive tumor profiling between August 2011 and February 2015. Specific testing was performed on tumor biopsy samples from all patients per physician request and included a combination of sequencing (Sanger, NGS or pyrosequencing), protein expression (IHC), gene amplification (CISH or FISH), and/or RNA fragment analysis. IHC analysis was performed on formalin-fixed paraffin-embedded tumor samples using commercially available detection kits, automated staining techniques (Benchmark XT, Ventana, and AutostainerLink 48, Dako), and commercially available antibodies. Fluorescent in-situ hybridization (FISH) was used for evaluation of the HER-2/neu [HER-2/CEP17 probe], EGFR [EGFR/CEP7 probe], and cMET [cMET/CEP7 probe] (Abbott Molecular/Vysis). HER-2/neu and cMET status were evaluated by chromogenic in-situ hybridization (INFORM HER-2 Dual ISH DNA Probe Cocktail; commercially available cMET and chromosome 7 DIG probe; Ventana). The same scoring system was applied as for FISH. Direct sequence analysis was performed on genomic DNA isolated from formalin-fixed paraffin-embedded tumor samples using the Illumina MiSeq platform. Specific regions of 45 genes of the genome were amplified using the Illumina TruSeq Amplicon Cancer Hotspot panel.

Results:

Demographic results: 101 patients in total (52 female, 49 male), 1 with insufficient material. Average age = 59.8 yo (median 61 yo, range 21-81). The majority of patients had an ECOG performance status of 0 or 1. Median prior lines of therapy – 2 (range 0 – 10). Average time to testing from biopsy = 172 days (median 18 days, range 7-2551). 70% of biopsies assessed were taken from a metastatic site. The major type of neoplasia included was breast cancer (25%), among which 75% were ductal, 18.75% were lobular and just one case of phyllode tumor. Fifty percent had hormone receptor + her 2 neg, 43.75% were triple negative and the
remaining one subject had triple positive tumor. Only data for breast cancer will be presented in this abstract.

**Treatments Associated with Potential Benefit and Potential Lack of Benefit:** Targeted therapies were associated with benefit in less than a quarter of patients overall and could be avoided in the majority of patients.

**Treatment Selection:** 20 patients were treated according after tumor profiling was performed and had at least one study evaluation afterwards. 17 (85%) patients received drugs associated with potential benefit only 1 (5%) patients received treatments not mentioned on the report. 15 (75%) patients received monotherapy of which 8 (40%) were per os.

**Clinical Outcomes:** Complete response (CR): 2 patients (10%); Partial response (PR): 4 patients (20%); Stable disease (SD): 8 patients (40%); Progressive disease (PD): 6 (30%). Disease control rate: 70% with an average duration of response 4.7 months.

**Conclusions:** Comprehensive multiplatform tumor profiling is feasible, with turnaround time amenable to routine clinical practice. The most common mutations identified were not direct candidates for targeted therapies. The majority of treatment associated with benefit are commercially available cytotoxic agents which allows high clinical utility of the approach. Clinical outcomes are very promising with the use of tumor-profiling guided treatment.

**Efficacy and safety of Everolimus in hormone positive breast cancer in a developing country: real-life single institutional experience**

Tarek Assi, Elie El Rassy, Samer Tabchi, Ralph Chebib, Tania Moussa, Colette Hanna, Fadi El Karak, Fadi Farhat, Joseph Kattan, Marwan Ghosn

*Department of Hematology-Oncology, Faculty of Medicine, Saint Joseph University, Beirut, Lebanon*

**Introduction:** Breast cancer is the second leading cause of cancer-related mortality despite the staggering improvement in cancer therapeutics. Published data so far demonstrate endocrine therapy as the cornerstone treatment for patients with hormone receptor-positive metastatic breast cancer. Unfortunately, most patients eventually develop resistance to this treatment. One possible option to overcome this resistance is via inhibition of the mTOR pathway.

**Patients and Methods:** The purpose of this study is to evaluate the efficacy of mTOR inhibition in reversing hormone resistance in the Lebanese breast cancer patients. We retrospectively evaluated the medical records of all hormone receptor-positive breast cancer patients who received a combination of Exemestane and Everolimus. Patient demographics, prior lines of therapy, response to the combination therapy and reported adverse events were analyzed. Efficacy of the intervention according to independent factorsand notable side effects encountered were the primary points of the evaluation.

**Results:** In total, 50 patients received the combination of Everolimus and Exemestane between January 2013 and December 2015. Mean age of the study population was 61 ± 11 years.
Almost two third of the patients were exposed to at least three or more lines of therapy while 86% of the patients were exposed to chemotherapy during their disease course. Sensitivity to hormonal therapy prior to the start of the combination treatment was estimated at 64%. Response rate was 14% with all patients being partial responders. After regular interval evaluation, the median progression-free survival was 5.2 months since initiation of therapy. The main toxicities associated with Exemestane and Everolimus were stomatitis (22%), myalgia (22%), skin toxicity (8%) and hyperglycemia (4%). Toxicities were limited to grade 1 and 2. Management of adverse effect included temporary interruption or dose reduction in 22% of patients. Notably, non-infectious pneumonitis was only reported in 2% of patients.

**Conclusion:** Everolimus has been shown to be an effective drug in overcoming hormonal resistance in the Lebanese breast cancer patients with results inferior to those reported in the BOLERO-2 population. The particular differences in molecular and pathological aspects of breast cancer in our region should stimulate extensive research for a better understanding of the particular pattern of the disease. A better tolerance of the drug is attributed to a control of the drug's side effects via adapted and preventive strategies.

---

**Delay in breast cancer adjuvant chemotherapy: profile of latecomers and potential effect on survival**

Fernand Bteich, Fady El Karak, Colette Hanna, Marwan Ghosn
Hematology-Oncology Department, Faculty of Medicine, Saint Joseph University.

**Purpose:** To determine demographic, clinical and pathological factors associated with a delay in initiating adjuvant chemotherapy after breast cancer surgery in patients with non-metastatic breast cancer and to evaluate for a potential detrimental effect of this delay on survival.

**Patients and Methods:** Eligible patients for this retrospective study had stage I, II or III breast cancer treated with surgery and having received adjuvant chemotherapy. The influence of different factors on the delay between surgery and chemotherapy (DSC) was evaluated in this population as well as the effect of this deferment on disease-free survival (DFS).

**Results:** 245 patients diagnosed with localized breast cancer between 2003 and 2010 (median age, 49 years) were enrolled on the study. Metastatic and in situ cancers were excluded from the analysis of associations. 24% had stage I disease, 46.8% were at stage II and 22.7% had stage III tumors. 13% had ER-HER2+ cancer, 53.2% ER+HER2-, 15.2% ER+HER2+ and 18.6% ER-HER2-. 53.2% of patients were mastectomized while 46.8% had breast conserving surgery. Patients were categorized into three groups according to DSC: ≤29 days, 30 to 49 days, and ≥50 days. Factors associated with delay in chemotherapy were advanced age at the moment of diagnosis (p=0.02), involvement of 3 or less axillary lymph nodes (p=0.02), a diagnosis in 2005 or 2006 (p=0.017) and in the ER+HER2- subtype, residence at distance from the capital (p=0.045). In a 5-year follow-up of 137 patients, 15 locoregional or distant relapses were noted (10.9% of patients). Disease-free survival (DFS) was 29.1 months. Survival analysis did not show a negative impact of a 30 to 50-day delay on disease-free survival compared to a delay of less than 30 days. (p=0.785) Moreover, an analysis of survival according to breast cancer subtype did not show a significant difference between various categories of the disease. (p=0.754)

**Conclusion:** Significant delays in initiating adjuvant breast cancer chemotherapy can happen in women aged 50 years or more, those with three or less involved axillary lymph nodes as well as in patients with ER+HER2- breast cancer living at distance from urban areas. Women with such profiles should be counseled about the importance of avoiding unnecessary breaks in treatment.
during the first interview. Nevertheless, postponements potentially affecting survival (>3 months) are scarce (<5%) which should temper the fear of moderate and justified delays especially that a DSC of 30 to 50 days instead of 29 days or less after surgery seem not to affect 5-year disease-free survival negatively.

Chemotherapy Extravasation: Guidelines and Practical tips

Kreidieh FY, Moukadem HA, El-Baba SM, El-Asmar RE, Shihab LF, El Saghir NS

Background: Chemotherapy extravasation is a safety concern to the medical team and the patients whenever IV chemotherapy is administered. It is defined as the accidental infiltration of chemotherapy into the subcutaneous or sub-dermal tissue at the injection site and can result in tissue necrosis.

Objectives and Methods: We review the clinical aspects of chemotherapy extravasation and latest advances in classification, prevention and management of chemotherapy extravasation (1-3,7). We review the grading of extravasation and tissue damage according to various chemotherapeutic drugs and present an update on treatment and new antidotes including dexrazoxane for anthracyclines extravasation (4). We present a situation online and on-site survey of chemotherapy centers and hospitals in Lebanon. We highlight the importance of education and training of the oncology team for prevention and prompt pharmacological and non-pharmacological management and stress the availability of new antidotes where anthracyclines are being infused.

Results: Majority of centers in Lebanon do not have posted instructions and guidelines on chemotherapy extravasation. AUBMC holds an annual educational session to oncology nursing staff as part of Nursing Skills Competency Program. Cases continue to occur, and incident reports are not always filled out. Antidotes are either out of stock or not available at various hospitals or clinics nor even in the country. There are no registries of cases of extravasation. Lectures and conferences on attitudes to take (“conduite a tenir”) for both physicians and nurses are minimal. Prevention and Management should be emphasized. Chemotherapy extravasation can be prevented through medical team continuing education, appropriate vascular access, appropriate cannula and needle selection, and patient education (1,5-7). Management of extravasation consists of both initial non-pharmacological methods, including normal saline and application of compressors, and pharmacological, including the use of antidotes. All institutions that administer intravenous chemotherapy should have known antidotes available.

Conclusions: Safe administration of chemotherapy and prevention of extravasation is a shared responsibility among medical team members. Education of patients about risks and manifestations are essential. While only some international societies and healthcare institutions have published and posted online their own policies and guidelines regarding extravasation prevention and management, there is an urgent need to have local institution education, training and guidelines, and antidotes should be available. We will summarize tips from our recent review published in the World Journal of Clinical Oncology in February 2016.

3. El Saghir NS and Otrock ZK Docetaxel extravasation into the normal breast during breast cancer treatment. Anticancer Drugs 2004; 15: 401-404
Examining the Drug Approval Process in Lebanon, Egypt, Algeria, and Gulf Arab Countries
El Saghir NS, Kreidieh FY

Introduction: Regulatory agency drug approval plays an important role in confirming the safety and efficacy of new drugs and ensuring patients have access to the best treatments in a timely manner. Patients’ access to cancer drugs varies among different regions of the world. Patients in some regions may need to wait years more than their counterparts elsewhere for the new drug to get approved. This abstract is based on our study published in ASCO Daily News at the Annual Meeting of the American Society of Clinical Oncology ASCO 2015 (1).

Background: A study conducted by Kasteng et al. compared the time between the introduction and drug approval of new cancer drug therapies among different countries worldwide. The time between introduction and drug approval ranged from 0.3-2.0 years (2). In Europe, the average total time was 0.9 years. In the United States, the median total approval time was 0.5 years for priority new molecular entities and 1 year for standard New Drug Applications and biologics. In Middle Eastern countries, median time ranged between 0.3 years in Bahrain and 1.75-2.0 years in Saudi Arabia and Qatar, respectively (2). In this review, we looked at drug registration in Lebanon, and compared it to drug approval process in other countries in Middle East and Gulf Arab countries.

Results: The variation in time for drug approval among different regions of the world is due to differences in national regulatory procedures. In Lebanon (3), the drug must have been proven safe and effective through clinical trials and preferably approved by the U.S. Food and Drug Administration (FDA) and/or European Medicines Agency (EMA) for the specific indication requested. The process takes 8-12 months. In Egypt (3), the drug approval application is viewed by multiple committees, and the approval process can take up to 5 years. In Algeria (4), revision of the Drug Record file generally takes 3 months or more, after which the Ministry of Health grants a 1-year provisional registration. In Saudi Arabia (5), drug approval, which can take up to 18 months, takes place through a Drug Sector in the Saudi Food and Drug Authority. In Bahrain (3), the average time for approval of new drugs is 3-6 months. In Oman (3), registration of a pharmaceutical product generally requires 6-12 months. However, in order to authorize local marketing of a drug in Bahrain and Oman, it has to have been marketed in another country for a minimum of 2 years.

Conclusion: Better collaboration between physicians and health authorities, who should watch for indiscriminate use and abuse of new drugs that are generally highly priced by pharmaceutical companies, is needed. Lebanon and Low- and Middle-Income countries need to look at their process of drug approval in order to avoid delays making effective drugs available.
for their patients (6). They also should look at resource-adapted guidelines and perform local research for better utilization of their resources and new drugs.


Prevalence and clinical characteristics of BRCA mutation in an unselected cohort of newly diagnosed Lebanese breast cancer patients
R. Alameddine¹, A. Hakim¹, L. Hilal², M. Charafeddine¹, F. Boulos³, D. Mukherji¹, N. El Saghir¹, S. Temraz¹, A. Tfayli¹, R. Mahfouz³, N. Majzoub³, E. Elias⁴, A. Saleh¹, L. Hamieh⁵, G. Nemer⁶, A. Shamseddine¹.
¹American University of Beirut, Hematology and Oncology, Beirut, Lebanon.
**Background:** Data on genetic mutation in Ethnic Arab patients (pts) is scarce. We reported that BRCA pathogenic mutations are present in 5.6% of pts at high risk for carrying a genetic mutation (Oncologist. 2015 Apr;20(4):357-64). We report here-in the prevalence of BRCA mutation in a cohort of newly diagnosed Ethnic Lebanese Arab primary breast cancer patients unselected for risk factors.
**Methods:** Between 2011 and 2013, 126 Lebanese women with newly diagnosed breast cancer were recruited. Pts had early or locally advanced disease. Study protocol was approved by IRB. Informed consent was obtained. Coding exons and intron-exon boundaries of BRCA1 and BRCA2 were extracted from peripheral blood DNA. Gene sequencing was performed following the Sanger technique at AUB Department of Biochemistry and Genetics, and NGS at Genekor Laboratories in Athens. Study was funded by research grants from Glaxo SmithKline and Novartis.
**Results:** BRCA gene testing was performed on 106 pts. Sanger technique was used on 25 pts and NGS on 81 pts. Median age of pts was 45 years. 53 out of the total of 106 pts (50%) had a positive family history (FH) of breast cancer. 4 out of 8 pts (50%) with positive BRCA mutation had a positive FH for breast cancer. 69 pts (65%) were ER/PR positive and HER2 negative, 26 pts (25%) were Her2 positive and 11 pts (10%) were triple negative breast cancer (TNBC). BRCA1 and 2 pathogenic mutations were present in 3 pts (2.8%) and 5 pts (4.7%) respectively. Of the BRCA1 pts, 2 out of 3 had a positive FH of breast cancer, 2 out of 3 had TNBC. Of the 5 BRCA2 pts, 2 had a positive FH for breast cancer, 4 had positive hormone receptors, 1 had a positive HER2, and 1 had TNBC. BRCA1 Variants of Unknown Significance (VUS) were found in 2 pts (1.9%) and BRCA2 VUS were found in 5 pts (4.7%).
Conclusions: The prevalence of BRCA 1 and 2 gene mutations in an unselected cohort of ethnic Lebanese Arab breast cancer pts, of whom 50% turned out to have a positive family history, is 7.5% with a BRCA VUS rate of 6.6%. These rates in a population of patients whose median age is 45 years are lower than those seen in similar Caucasian patients. Search for other mutations is needed.

Age less than 40 years is an independent predictor of worse prognosis among Lebanese breast cancer patients: Analysis from a prospective cohort

R. Alameddine¹, A. Hakim¹, L. Hilal², M. Charafeddine¹, F. Boulos³, D. Mukherji¹, N. El Saghir¹, S. Temraz¹, A. Tfrayli¹, R. Mahfouz³, N. Majzoub³, E. Elias⁴, A. Saleh¹, L. Hamieh⁵, G. Nemer⁶, A. Shamseddine¹.
¹American University of Beirut, Hematology and Oncology, Beirut, Lebanon.

Background: Breast cancer among young women in Lebanon is a subject of rising public concern. Several retrospective studies have reported a younger median age at presentation and a more aggressive disease among younger patients. In Lebanon, 18-20% of breast cancer patients are younger than 40, compared to 5-7% in Europe and USA. In this study, we prospectively assessed the association between different baseline characteristics and outcomes among newly diagnosed Lebanese breast cancer patients.

Methods: We recruited a sample of 126 women newly diagnosed with breast cancer presenting to American University of Beirut Medical Center (AUBMC). Immunohistochemical, molecular and genetic assays were performed; in addition, clinical data was collected. Data and disease free survival were analyzed using Chi-square, Cox regression analysis, and Kaplan Meier.

Results: 46 patients were ≤ 40 years and 80 patients > 40 years. Median follow up duration was 35 months. 11 out of 40 patients ≤ 40 years (24.4%) experienced disease relapse in contrast to 6 out of 86 patients >40 years (7.9%). A wide immunohistochemical panel included ki-67, cyclin B1, p53, PDGFR and VEGFR and did not reveal any significant difference between the two age groups. On multivariate analysis including age, stage, grade, Her2neu status, and triple negative phenotype. Only age below 40 and stage III were significantly associated with shorter disease free survival with hazard ratios of 6 (p= 0.003, 95% CI: 1.9 – 19.6) and 2.7 (p= 0.058, 95% CI: 0.7 – 10.5), respectively. The three-year disease free survival for patients below 40 was 70.5%; whereas, it was 92.1% for patients above 40 (p=0.001).

Conclusions: Age ≤ 40 years was an independent risk factor for recurrence in this cohort of patients. This finding warrants a special consideration of age as a poor prognostic factor in daily decision-making. It also invites future research investigating the molecular biology of breast cancer affecting young women.
Contact Information

For more information about this activity, please contact:

Continuing Medical Education (CME) Office
American University of Beirut Medical Center
P.O. Box 11-236 Riad El Solh
Beirut 1107 2020, Lebanon
Tel: +961-1-350 000 ext. 4717 – 4718; Fax: +961-1-744 467
Email: cme@aub.edu.lb
Web: http://cme.aub.edu.lb