



Regional Training Course on Multimodality Medical Imaging Techniques in Cardiotoxicity in Cancer Patients – Part 2

Hosted by

Government of Mexico
Cancun, Mexico

through the

Federación Mexicana de Medicina Nuclear e Imagen Molecular

10-14 March 2025

Ref. No.: RTC-RLA6093- EVT2406602

Information Sheet

Purpose

The purpose of the event is to emphasize the efficiency of medical imaging as a secure and cost-effective solution in managing diverse non-communicable diseases, encompassing diagnosis, staging, and follow-up. Tailored for healthcare professionals, the course is structured to equip them with the necessary knowledge and skills for applying nuclear techniques and medical imaging specifically within the specialized domain of cardio-oncology.

Working Language

The working language of the event will be **Spanish**.

Deadline for Nominations

Nominations received after **13 December 2024** will not be considered.

Project Background

Cardiovascular diseases (CVDs) and cancer constitute the main causes of death in Latin America (LA). Among risk factors common to both non-communicable diseases (NCDs) are the smoking habit, physical inactivity, dyslipidemia, diabetes mellitus, high blood pressure and obesity, due to physiopathologic processes, such as chronic inflammation and oxidative stress. New drugs have been developed to improve survival and remission rates in cancer. However, there is an important caveat due to the cardiotoxicity of these therapies. Cardiotoxicity is a known adverse event of the oncologic therapy, which on many occasions limits the adequate administration of therapies with a subsequent reduction of efficacy. Thus, understanding of pathophysiologic and molecular basis is essential to establish preventive and therapeutic measures, which allow a reduction of the incidence of cardiotoxicity, without affecting the effectiveness of oncologic therapy. Diagnostic units using imaging multimodality that were already established in a previous ARCAL project will be used and human resources will be trained consequently, considering a sex and gender approach for the management of cardiotoxicity in cancer patients. Nuclear techniques are relevant in these units because they are useful to detect ischemia and to assess ventricular function. This new proposal constitutes the continuation of ARCAL project RLA6086: “cardiovascular disease in Latin American women. Role of Nuclear Medicine techniques with a multimodality approach in Cardiology”. It represents the natural evolution, because from the assessment of ischemic heart disease, the evaluation of cardiovascular complications after chemotherapy and radiotherapy, will be made, with the emphasis on women.

Expected Outputs

By the end of the course, participants should have acquired:

- a) Advanced skills in medical imaging techniques for evaluating cardiotoxicity in patients’ post-chemotherapy and radiotherapy, including proficiency in interpreting imaging results and identifying cardiac abnormalities related to treatment.
- b) Enhanced diagnostic accuracy in detecting and assessing cardiotoxicity through medical imaging, enabling early intervention to optimize patient outcomes and minimize the impact of treatment-related cardiac issues.
- c) Informed decision-making in the use and interpretation of medical imaging modalities for evaluating cardiotoxicity, contributing to personalized and comprehensive treatment strategies.
- d) Integration of Multimodal Imaging Approaches: The ability to combine various imaging techniques (e.g., echocardiography, MRI, CT, nuclear imaging) for a comprehensive assessment of cardiac health in cancer patients, improving the accuracy of cardiotoxicity assessment.
- e) Advanced Imaging Protocols in Research and Clinical Practice: Proficiency in applying advanced imaging protocols to monitor cardiotoxicity in both clinical trials and routine practice, supporting research and evidence-based approaches in cardio-oncology.

Scope and Nature

The main goal of this cardio-oncology course is to emphasize the crucial role played by medical multimodality imaging in transforming the approach to managing cardiovascular complications in cancer patients. The course focuses on highlighting the cost-effectiveness and safety of nuclear medicine techniques in navigating the intricate landscape of cardio-oncology, covering early diagnosis, staging, and post-diagnostic follow-up. The structure involves participating in interactive discussion sessions that delve into the latest trends in nuclear medicine technology and techniques, specifically within the context of cardio-oncology. The lectures aim to establish a theoretical foundation and to explore practical applications of nuclear medicine in cardiovascular health, with a particular emphasis on molecular hybrid imaging.

a) Assess and compare the impact and cost-effectiveness of current and emerging applications within nuclear medicine technology, focusing specifically on molecular hybrid imaging techniques in the field of cardio-oncology.

b) Investigate the policy-making and regulatory consequences associated with the integration of PET-CT/SPECT-CT technology in the cardio-oncology domain. Delve into the challenges and opportunities regarding the accessibility and development of positron emitter tracers for cardiovascular imaging.

c) Examine the crucial role of nuclear medicine technology in addressing the burden of Non-communicable Diseases, especially in the context of cardio-oncology. Explore innovative approaches and strategies for integrating nuclear medicine into comprehensive cardiovascular care for cancer patients.

Participation

As agreed in the First Coordination Meeting, this event is open to all participating Member States of project RLA6093 “Strengthening of Regional Capacities on the Use of Nuclear Medicine Techniques in a Cardio-Oncology Multimodality Approach in Patients with Cancer (ARCAL CXCI)”: namely, Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

Each country is invited to nominate **one (1)** participant in person.

Participant Profile

The participants should be: Nuclear medicine physicians, nuclear cardiologists, cardiologists interested in cardio-oncology, oncologists, nuclear medicine technologists, and radiologists working in cardiology imaging.

Application Procedure

Candidates wishing to apply for this event should follow the steps below:

1. Access the InTouch+ home page (<https://intouchplus.iaea.org>) using the candidate's existing Nucleus username and password. If the candidate is not a registered Nucleus user, she/he must create a Nucleus account (<https://websso.iaea.org/IM/UserRegistrationPage.aspx>) before proceeding with the event application process below.
2. On the InTouch + platform, the candidate must:
 - a. Finalize or update her/his personal details, provide sufficient information to establish the required qualifications regarding education, language skills and work experience ('Profile' tab) and upload relevant supporting documents;
 - b. Search for the relevant technical cooperation event (**EVT2406602**) under the 'My Eligible Events' tab, answer the mandatory questions and lastly submit the application to the required authority.

NOTE: Completed applications need to be approved by the relevant national authority, i.e. the National Liaison Office, and submitted to the IAEA through the established official channels by the provided designation deadline.

For additional support on how to apply for an event, please refer to the [InTouch+ Help page](#). Any issues or queries related to InTouch+ can be addressed to InTouchPlus.Contact-Point@iaea.org.

Should online application submission not be possible, candidates may download the nomination form for the meeting from the [IAEA website](#).

Administrative and Financial Arrangements

Nominating authorities will be informed in due course of the names of the candidates who have been selected and will at that time be informed of the procedure to be followed with regard to administrative and financial matters.

Selected participants will receive an allowance from the IAEA sufficient to cover their costs of lodging, daily subsistence and miscellaneous expenses. They will also receive either a round-trip air ticket based on the most direct and economical route between the airport nearest their residence and the airport nearest the duty station through the IAEA's travel agency American Express, or a travel grant, or they will be reimbursed travel by car/bus/train in accordance with IAEA rules for non-staff travel.

Disclaimer of Liability

The organizers of the event do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the course, and it is clearly understood that each Government, in approving his/her participation, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks.

Note for female participants

Any woman engaged by the IAEA for work or training should notify the IAEA on becoming aware that she is pregnant.

The Board of Governors of the IAEA approved new International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources. The Standards deal specifically with the occupational exposure conditions of female workers by requiring, inter alia, that a female worker should, on becoming aware that she is pregnant, notify her employer in order that her working conditions may be modified, if necessary. This notification shall not be considered a reason to exclude her from work; however, her working conditions, with respect to occupational exposure shall be adapted with a view to ensuring that her embryo or foetus be afforded the same broad level of protection as required for members of the public.