

Cuba: showcasing how the continuous IAEA support has impacted the lives of ailing patients within a span of 10 years

Amalia Peix, MD, PhD, FACC, FASNC

Institute of Cardiology
Havana, Cuba

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IAEA Scientific Forum

**Nuclear Techniques
in Human Health**

Prevention, Diagnosis, Treatment



● Epidemiology of cardiovascular diseases

Main causes of death
Cuba. Years 2000, 2015, 2016

	2000		2015		2016	
	Deaths	Rate	Deaths	Rate	Deaths	Rate
Heart Diseases	20 258	181.1	24 646	219.6	24 462	217.7
Cancer	16 426	146.8	24 333	216.8	24 303	216.3
Cerebrovascular Diseases	8 143	72.8	9 320	83.0	9 465	84.2

Rate per 100 000 inhabitants

Source: Cuban Ministry of Health, 2016

Nuclear Cardiology in Cuba



Contributors

**IAEA, TC Project: 6016 Nuclear Cardiology,
Institutes of Cardiology and Nephrology**





**IAEA, TC Project: 6018, CIC & Institute
Nephrology (1st. SPECT-CT, introduction of
hybrid imaging)**

**Cuban Agency of Nuclear Energy
& Advanced Technologies**

Ministry of Health

Isotopes Center, CENTIS

CUB/6/016: "Strengthening Nuclear Cardiology in Cuba for Diagnosis and Treatment of Coronary Heart Disease Patients". End: 2009

OBJECTIVE	<p>REDUCED MORTALITY BY CORONARY HEART DISEASE (CHD)</p>	
OUTCOME	<p>DIAGNOSIS OF PATIENTS WITH CHD IMPROVED BY NUCLEAR CARDIOLOGY TECHNIQUES</p>	
OUTPUTS	<ul style="list-style-type: none"> • STUDY PROTOCOL OF CHD IMPLEMENTED • SPECT TECHNOLOGY INCORPORATED 	
ACTIVITIES	<ul style="list-style-type: none"> • TRAINING, WORKSHOPS • SET-UP AND GENERALIZATION OF Protocols • GAMMACAMERA INSTALLATION 	

Problem solution

- Cuban contribution:



Inst. Cardiology before 2008



Inst. Cardiology May 2009

The impact of IAEA contribution.....



**Two Nuclear
Medicine
Departments
totally equipped**



**Medical Care
Teaching**

**November
2012:
Nuclear
Cardiology
Section
(Cuban
Society of
Cardiology)**



**Research
Cooperation**



MEDICAL CARE

Cardiac SPECT Number of patients studied



SPECT-CT
installation
in Institute
of
Cardiology:
October

**Institutes of
Cardiology &
Nephrology, CIC,
Ameijeiras Hospital**

■ Number of SPECT studies



Resources: **Strengthening Nuclear Cardiology in Cuba: Success Story**
Saving Lives in Cuba with Nuclear Cardiology

<http://www-naweb.iaea.org/na/>

Coordinated Research Projects Participation in 7 CRPs – Scientific Production

ORIGINAL ARTICLE

J Nucl Cardiol 2011;18:398

Interrelationship between myocardial perfusion imaging, coronary calcium score, and endothelial function in asymptomatic diabetics and controls

Amalia Peix, MD, DSc,^a Lázaro O. Cabrera, MD,^a Flor Heres, MD,^b Lydia Rodríguez, BSc,^c Alexander Valdés, MD,^a Juan Valiente, MD,^d Raymid García, MD,^d Manuel Licea, MD,^e Vladimir Mendoza, MD,^f Francisco Gárciga, MD,^e Yaquelin Rodríguez, BSc,^g Regla Carrillo, NMT,^a Erick Mena, BSc,^a Yoel Fernández, BSc,^a Minerva Montero, PhD,^a and Maurizio Dondi, MD, PhD^h

Detection of post-exercise stunning by early gated SPECT myocardial perfusion imaging: Results from the IAEA multi-center study

Fernando Mut, MD,^a Raffaele Giubbini, MD,^b Joao Vitola, MD,^c Lara Lusa, PhD,^d Dragana Sobic-Saranovic, MD, PhD,^e Amalia Peix, MD,^f Francesco Bertagna, MD,^b Dieu Hang Bui, MD,^g Carlos Cunha, MD,^c Jerry Obaldo, MD,^h Carlo Rodella, PhD,^b Luca Camoni, MSc,^b Diana Paez, MD,ⁱ and Maurizio Dondi, MDⁱ

^a Department of Nuclear Medicine, Spanish Association Hospital, Montevideo, Uruguay

^b Department of Nuclear Medicine, University and Spedali Civili, Brescia, Italy

^c Department of Nuclear Medicine, Quanta Diagnostico & Terapia, Curitiba, Brazil

^d Institute of Statistics, University of Ljubljana Medical Faculty, Ljubljana, Slovenia

^e Department of Nuclear Medicine, Faculty of Medicine, University of Belgrade, Belgrade, Serbia

^f Department of Cardiology, Institute of Cardiology and Cardiovascular Surgery, Havana, Cuba

^g Department of Nuclear Medicine, Cho Ray Hospital, University of Ho Chi Minh City, Ho Chi Minh City, Vietnam

^h Division of Nuclear Medicine, Philippine Heart Center, Quezon, Philippines

ⁱ Nuclear Medicine Section, International Atomic Energy Agency, Vienna, Austria

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Association between non-perfusion parameters and presence of ischemia in gated-SPECT myocardial perfusion imaging studies

Amalia Peix, Lázaro O. Cabrera, Kenia Padrón, Lydia Rodríguez, Jesús Fernández, Giselle López, Regla Carrillo, Erick Mena, et al.

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Regional Projects



RLA 6/070: “Harmonization of Nuclear Cardiology techniques in patients with heart failure, with emphasis on Chagas’ cardiomyopathy” (2012-2014, DTM: Cuba)

RLA 6/078: “Facing the high incidence of cardiovascular diseases in Latin America and the Caribbean through nuclear cardiology” (2016-2018, DTM: Cuba)

Current status of nuclear cardiology practice in Latin America and the Caribbean

On behalf of IAEA RLA 6078 “Facing the high incidence of cardiovascular diseases in Latin America and the Caribbean through nuclear cardiology” participants

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Review article

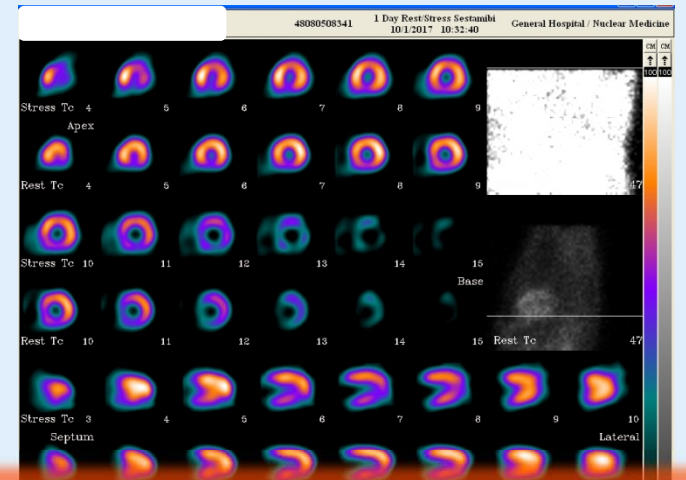
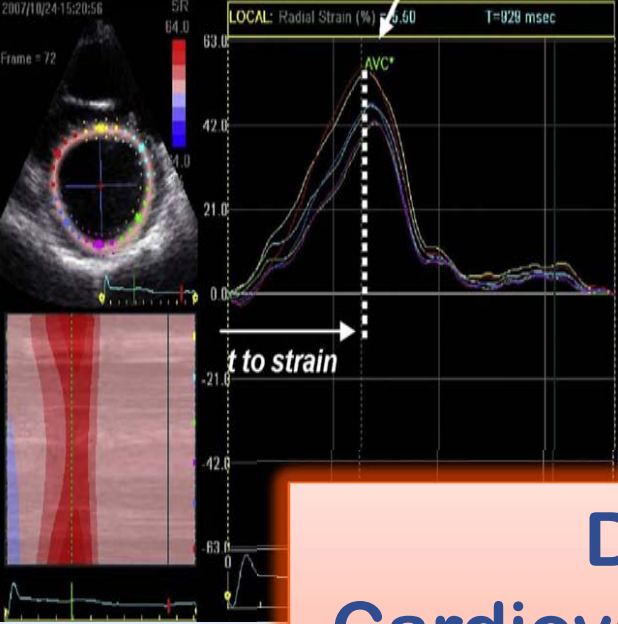
Nuclear
Medicine
Communications

Nuclear medicine in the management of patients with heart failure: guidance from an expert panel of the International Atomic Energy Agency (IAEA)

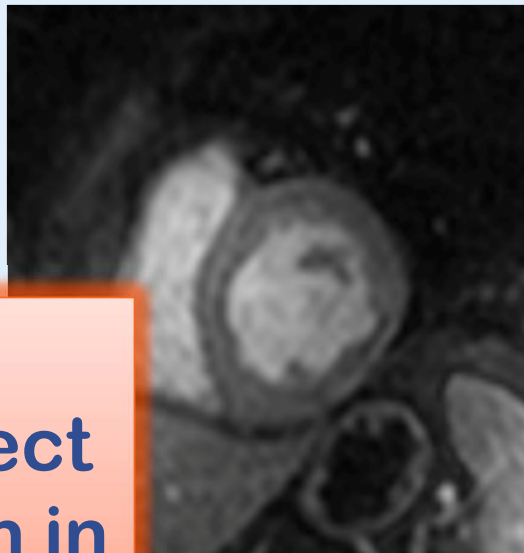
Amalia Peix^b, Claudio Tinoco Mesquita^c, Diana Paez^a, Carlos Cunha Pereira^d, Renata Felix^e, Claudia Gutierrez^g, Rodrigo Jaimovichⁱ, Barbara Maria Ianni^f, Jose Soares Jr^f, Pastor Olaya^h, Ma. Victoria Rodriguez^j, Albert Flotats^k, Raffaele Giubbini^l, Mark Travin^m and Ernest V. Garciaⁿ

Nuclear Medicine Communications 2014, 35:818–823

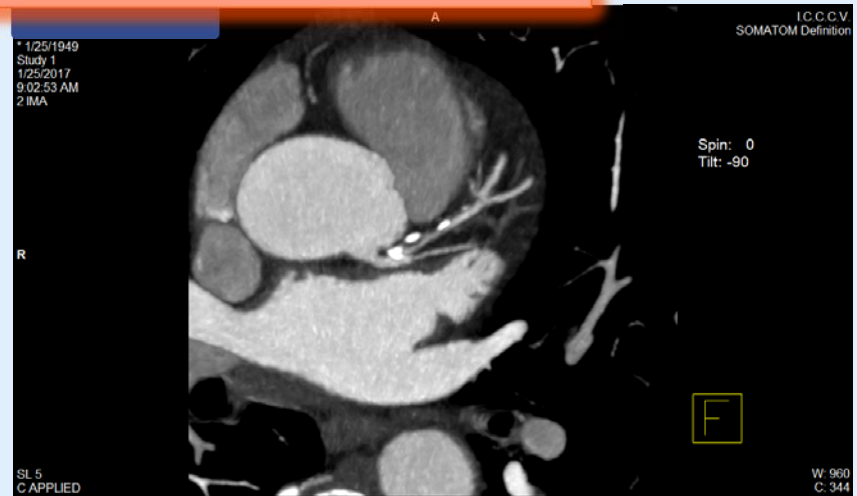




FUTURE...



Development of a Cardiovascular Imaging Project on the multimodality approach in cardiac patients



Thank you!

