



ACC Latin America
Conference 2018

In partnership with:



LIMA

NOVEMBER 16 - 17, 2018



#ACCIntlConf

CARDIO ONCOLOGIA

Dr. Rodolfo R. Barreto; FACC, FESC

Dr. Juan Aranda; FACC - USA

Juan M Aranda, Jr, MD, FACC



Specialty

Medicine

Subspecialty

Cardiovascular Disease

Advanced Heart Failure and Transplant
Cardiology

Clinical Interests

- Cardiac catheterization
- Heart failure - overview
- Heart transplant



Juan Aranda, MD

*ME CURARON DE
UN **CANCER***



PERO

*AHORA ME ESTOY
MURIENDO
DEL **CORAZON***





AMERICAN
COLLEGE *of*
CARDIOLOGY



Advancing Cardiovascular Care of the Oncology Patient

February 16, 2018 - February 18, 2018  iCal



AMERICAN
COLLEGE *of*
CARDIOLOGY

Cardio- Oncology

Advancing Cardiovascular Care
of the Oncology Patient

FEBRUARY 17-18, 2017

Park Hyatt
Washington DC

ACC Education 
Always Learning.

Register
Today!

JANUARY 25 - 27, 2019

The Ritz-Carlton · Washington, DC

Advancing the Cardiovascular Care of the Oncology Patient

For more
information
and to register visit
ACC.org/CVOncology



**American
Heart
Association®**

Learn and Live



**Cancer Action
NetworkSM**



**American
Cancer
Society®**



Daniela Cardinale, MD, PhD, FESC

Director – Cardio Oncology Unit

European Institute Oncology – Milan - Italy



MD Anderson is



U.S. News & World Report's
"Best Hospitals" annual survey

No. 1 in
cancer
care



Memorial Sloan Kettering
Cancer Center

El Departamento de Cardiología del MD Anderson fundó el año 2000 la "CARDIO ONCOLOGY UNIT"

La Enfermedad Cardiovascular es la mayor causa de MorbiMortalidad en los sobrevivientes de Cancer.

El riesgo cardiaco y vascular es 8 veces mayor que en la población general.

El daño cardiaco y vascular ocurre en el 50% de sobrevivientes, en 5 años después de quimioterapia.

**MEMORIAL SLOAN KETTERING
CANCER CENTER
NEW YORK USA**



Memorial Sloan Kettering
Cancer Center

CME MOC

2018 MSK CARDIO-ONCOLOGY SYMPOSIUM

Cardiovascular Health and Disease
During and After Cancer Therapy

A CASE-BASED CURRICULUM

MAY 18-19, 2018

Memorial Sloan Kettering Cancer Center
Rockefeller Research Laboratories
430 East 67th Street
New York, NY 10065

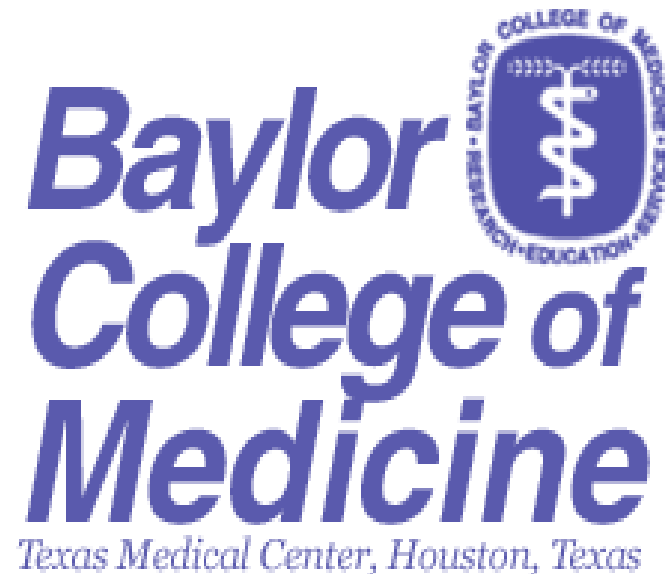
***DIRECTOR OF THE
CARDIO ONCOLOGY
CENTER***

***CHIEF OF CLINICAL
OPERATIONS OF THE SECTION
OF CARDIOLOGY***

***CO DIRECTOR OF THE CENTER
FOR ADVANCING CARDIAC
IMAGING***



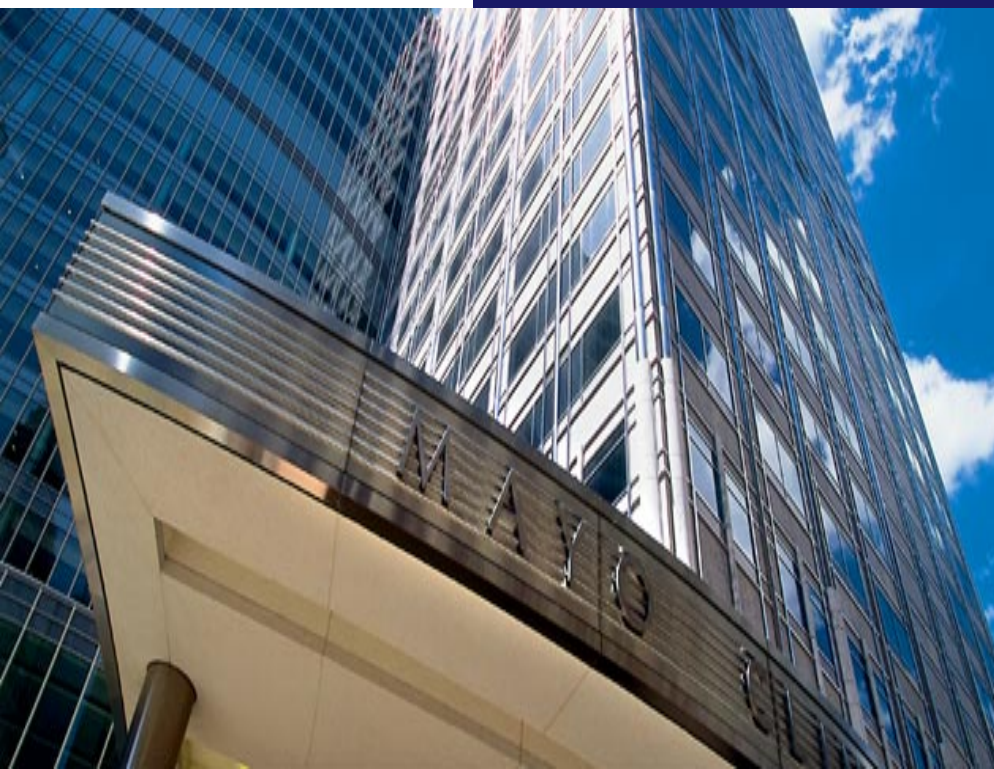
JUAN CARLOS PLANA, MD, FACC, FASE





Departments and Centers Cardio Oncology Clinic

***Afrontar el Cancer:** es una batalla
y una actitud positiva con
esperanza son armas cruciales!*



***"Taking Survival To Heart"
Juntando Cardiólogos y
Oncólogos para mejorar el
tratamiento del paciente con
cancer.***

REVIEW

Open Access



Rationale for setting up a cardio-oncology unit: our experience at Mayo Clinic

Sergio Barros-Gomes, Joerg Herrmann, Sharon L. Mulvagh, Amir Lerman, Grace Lin and Hector R. Villarraga*

Abstract

Background: The diagnosis and management of cardiovascular complications have become a clinical concern for oncologists, cardiologists, surgeons, interventional radiologists, radiation therapy physicians, internists, nurses, pharmacists, administrators, and all the stakeholders involved in the care of cancer patients. Anticancer therapies have extended the lives of patients with cancer, but for some this benefit is attenuated by adverse cardiovascular effects.

Methods: This review article aims to provide an overview of the rationale of setting up a cardio-oncology unit and reflect on our own experience establishing this service, and conclude with some fundamental aspects of consideration for evaluation and management of patients with cancer and cardiovascular diseases.

Results: Cardiotoxicity can lead to congestive heart failure and cardiac death. In fact, chemotherapy-related cardiac dysfunction may carry one of the worst prognoses of all types of cardiomyopathies, and has a profound impact on morbidity and mortality in oncology patients. Other complex clinical situations involve cancer patients who might benefit from a highly curative drug in terms of cancer survival but face limitations of its administration because of concomitant cardiovascular diseases. Indeed, the balance between the benefits and risks of the cancer therapy regimen in the context of the cardiovascular status of the individual patient can sometimes be extraordinarily challenging. A subspecialty with a multidisciplinary integrative approach between oncologists, hematologists, cardiologists, among others has thus emerged to address these issues, termed cardio-oncology. Cardio-oncology addresses the spectrum of prevention, detection, monitoring and treatment of cancer patients with cardiovascular diseases, or at risk for cardiotoxicity, in a multidisciplinary manner. In this field, cardiologists assist oncologists and hematologists with cardiovascular recommendations. This can be mediated through e-consultations or face-to-face evaluations.

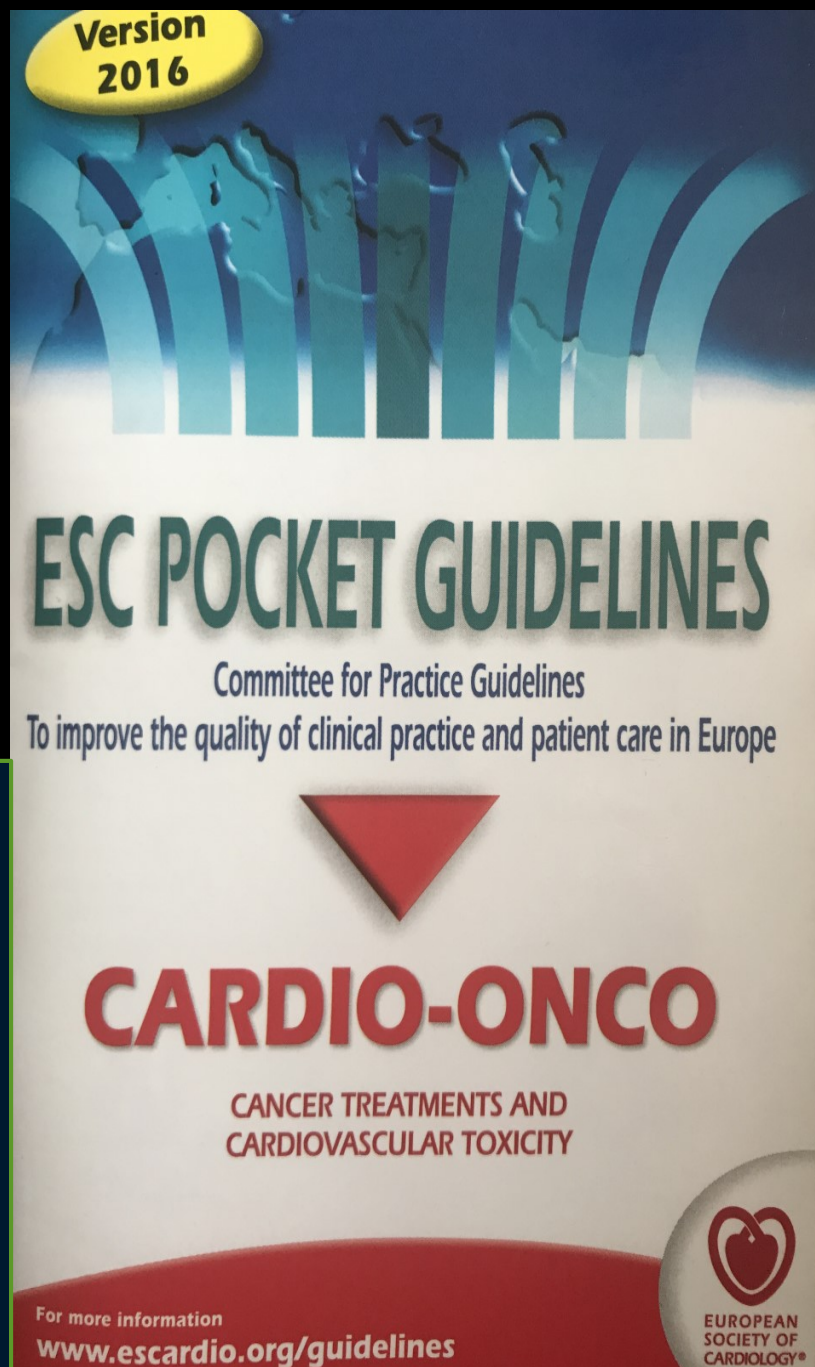
Conclusion: Cardio-oncology is a subspecialty that assists in the overall care of cancer patients with and without cardiovascular disease in an interdisciplinary fashion. We believe that this partnership of sharing responsibilities and experiences among health-care team members can potentially decrease cancer therapeutics-related cardiovascular complications and improve clinical outcomes.



Dr. José Luis Zamorano
Cardiólogo

Director de las Guías 2016 de la
Sociedad Europea de Cardiología

www.escardio.org/guidelines



Cardio-Oncology Services: rationale, organization, and implementation

A report from the ESC Cardio-Oncology council

Patrizio Lancellotti^{1,2*}, Thomas M. Suter³, Teresa López-Fernández⁴,
Maurizio Galderisi⁵, Alexander R. Lyon⁶, Peter Van der Meer⁷, Alain Cohen Solal⁸,
Jose-Luis Zamorano⁹, Guy Jerusalem¹⁰, Marie Moonen¹, Victor Aboyans¹¹,
Jeroen J. Bax¹², and Riccardo Asteggiano¹³

¹Department of Cardiology, GIGA Cardiovascular Sciences, University of Liège Hospital, CHU Sart Tilman, Avenue de L'Hôpital 1, 4000 Liège, Belgium; ²Gruppo Villa Maria Care and Research, Anthea Hospital, VIA C. ROSALBA, 35/37 70124 BARI (BA) - Puglia, Italy; ³Department of Cardiology, Inselspital, Bern University Hospital, University of Bern; ⁴Department of Cardiology, La Paz University Hospital, IdiPAZ, CiberCV, Madrid, Spain; ⁵Department of Advanced Biomedical Sciences, Federico II University Hospital, Naples, Italy; ⁶Royal Brompton Hospital and Imperial College, Dovehouse Street, London, SW3 6LY, UK; ⁷Department of Cardiology, University Medical Center Groningen, University of Groningen, Hanzeplein 1, 9713 GZ, The Netherlands; ⁸UMR INSERM U-942 "BIOmarkers in CARDioNeuroVAscular diseases" Université Paris VII—Denis Diderot Assistance Publique—Hôpitaux de Paris Service de Cardiologie, Hôpital Lariboisière, 2 rue Ambroise-Paré, 75010 Paris, France; ⁹University Alcalá, Hospital Ramón y Cajal, Ciber CV, 28034 Madrid, Spain; ¹⁰University of Liège Hospital, Medical Oncology, CHU Sart Tilman, Avenue de L'Hôpital 1, 4000 Liège, Belgium; ¹¹Department of Cardiology, Dupuytren University Hospital, Limoges, France; ¹²Department of Cardiology, Leiden University Medical Center, The Netherlands; and ¹³Cardiologist in Practice, Corso Venezia 10, 10155 Turin, Italy

Received 5 March 2018; revised 2 May 2018; editorial decision 9 July 2018; accepted 9 July 2018

Cardio-Onco-Hematología en la práctica clínica.

Documento de consenso y recomendaciones



Teresa López-Fernández^{a,b,*}, Ana Martín García^{b,c}, Ana Santaballa Beltrán^{b,d}, Ángel Montero Luis^{b,e}, Ramón García Sanz^{b,f}, Pilar Mazón Ramos^g, Sonia Velasco del Castillo^h, Esteban López de Sá Areses^a, Manuel Barreiro-Pérez^c, Rocío Hinojar Baydesⁱ, Leopoldo Pérez de Isla^j, Silvia Cayetana Valbuena López^a, Regina Dalmau González-Gallarza^a, Francisco Calvo-Iglesias^k, Juan José González Ferrer^{b,j}, Antonio Castro Fernández^l, Eva González-Caballero^m, Cristina Mitroi^{b,n}, Meritxell Arenas^{b,o}, Juan Antonio Virizuela Echaburu^{b,p}, Pascual Marco Vera^{b,q}, Andrés Íñiguez Romo^k, José Luis Zamorano^{i,1}, Juan Carlos Plana Gómez^{r,1} y José Luis López Sendón Henchel^{a,1}

^a Servicio de Cardiología, Hospital Universitario La Paz, Instituto de Investigación La Paz-IdiPAZ, Madrid, España

^b Comisión de Trabajo Conjunta Sociedad Española de Cardiología-Sociedad Española de Oncología Médica-Sociedad Española de Oncología Radioterápica-Sociedad Española de Hematología, España

^c Servicio de Cardiología, Complejo Asistencial Universitario de Salamanca (CAUSA), Instituto de Investigación Biomédica de Salamanca (IBSAL), Salamanca, España

^d Servicio de Oncología Médica, Hospital Universitari i Politècnic La Fe, Valencia, España

^e Servicio de Oncología Radioterápica, Centro Integral Oncológico Clara Campal (CIOCC), Hospital Universitario HM Sanchinarro, Madrid, España

^f Servicio de Hematología, Complejo Asistencial Universitario de Salamanca (CAUSA), Instituto de Investigación Biomédica de Salamanca (IBSAL), Salamanca, España

^g Servicio de Cardiología, Hospital Clínico Universitario de Santiago de Compostela, Santiago de Compostela, A Coruña, España

^h Servicio de Cardiología, Hospital de Galdakao, Galdácano, Vizcaya, España

ⁱ Servicio de Cardiología, Hospital Universitario Ramón y Cajal, Madrid, España

^j Servicio de Cardiología, Hospital Clínico San Carlos, Universidad Complutense de Madrid, IDISSC, Madrid, España

^k Servicio de Cardiología, Hospital Álvaro Cunqueiro, Vigo, Pontevedra, España

^l Servicio de Cardiología, Hospital Universitario Virgen Macarena, Sevilla, España

^m Departamento de Cardiología Clínica, Hospital Jerez de la Frontera, Jerez de la Frontera, Cádiz, España

ⁿ Servicio de Cardiología, Hospital Universitario Puerta de Hierro, Majadahonda, Madrid, España

^o Servicio de Oncología Radioterápica, Hospital Universitari Sant Joan de Reus, Universitat Rovira i Virgili, Reus, Tarragona, España

^p Servicio de Oncología Médica, Hospital Virgen Macarena, Sevilla, España

^q Servicio de Hematología, Hospital General Universitario, Alicante, España

^r Section of Cardiology, Baylor College of Medicine, Houston, Texas, Estados Unidos

STUDY PROTOCOL

Open Access



Rationale and design of the multidisciplinary team Intervention in cArdio-oNcology study (TITAN)

Edith Pituskin^{1,3,5*}, Mark Haykowsky², Margaret McNeely^{1,3}, John Mackey^{1,3}, Neil Chua^{1,3} and Ian Paterson^{1,4}

Abstract

Background: Cancer is the leading cause of premature death in Canada. In the last decade, important gains in cancer survival have been achieved by advances in adjuvant treatment. However, many oncologic treatments also result in cardiovascular "toxicity". Furthermore, cardiac risk factors such as hypertension, dyslipidemia, and diabetes mellitus are known to contribute to the progression of cardiac damage and clinical cardiotoxicity. As such, for many survivors, the risk of death from cardiac disease exceeds that of recurrent cancer. While provision of care by multidisciplinary teams has been shown to reduce mortality and hospitalizations among heart failure patients, the effect of assessments and interventions by multidisciplinary specialists in cancer patients receiving cardiotoxic chemotherapy regimens is currently unknown. Accordingly, we will examine the effect of a multi-disciplinary team interventions in the early assessment, identification and treatment of cardiovascular risk factors in cancer patients receiving adjuvant systemic therapy. Our main hypothesis is to determine if the incidence of LV dysfunction in cancer patients undergoing adjuvant therapy can be reduced through a multidisciplinary team approach.



SOCIEDAD PERUANA DE CARDIOLOGIA
XXVI CONGRESO PERUANO DE
CARDIOLOGIA



CURSO PRE CONGRESO DE
CARDIO - ONCOLOGIA

HOTEL SHERATON : SALON LIBERTADORES
Jueves 27 de Abril del 2017

EXPOSITORES Y MODERADORES:

Dra. Estela Ayala
Dr. Rodolfo R. Barreto
Dr. José Gálvez Dañino
Dr. Henry Gómez
Dr. Enrique Ruiz Mori
Dr. Pedro Martín Salazar Cáceres
Dr. Gustavo Sarria
Dr. José Manuel Sosa
Dr. Germán Valenzuela Rodríguez
Dr. César Samanéz Figari

INVITADO ESPECIAL

Dr. Juan Carlos Plana Gómez
Director del Centro Cardio - Oncológico
Baylor St. Luke's Medical Center
Houston, Texas

- **Se entregará Certificado de Asistencia**
- **Ingreso Libre**

TEMARIO

- **Cáncer: Un problema de salud en el Perú.**
- **Quimioterapia y Cardiotoxicidad**
- **Radioterapia y Complicaciones Cardiovasculares.**
- **Riesgo Cardiovascular en el Tratamiento del Cáncer de Mama: Trastuzumab, Antraciclicos, Radioterapia y Terapia Hormonal.**
- **Experiencia como Director del Centro de Cardio Oncología Baylor St. Luke's Medical Center. Recomendaciones para su Implementación en el Perú.**
- **Riesgo de Tromboembolismo Venoso en pacientes con Cáncer. Prevención y Tratamiento.**
- **Prevención y Seguimiento de Toxicidad Cardiológica y Vascular; aguda y tardía.**
- **Consenso de Expertos para la Evaluación por Imágenes de Pacientes Adultos Durante y Después del Tratamiento por Cáncer. A qué pacientes, cuán frecuente, qué técnica.**
- **Perspectiva del Oncólogo Clínico en el mundo real.**
- **Recomendaciones para el trabajo en Equipo.**

Get Full Access and More at

ExpertConsult.com

Clinical Cardio-oncology

JOERG HERRMANN

with Foreword from DOUGLAS R. ZIPES

ELSEVIER

Manual of Cardio-oncology

Cardiovascular Care in
the Cancer Patient

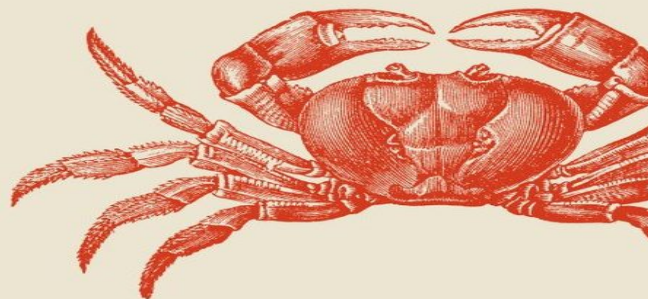
Chiara Lestuzzi
Stefano Oliva
Francesco Ferràu
Editors

 Springer

SIDDHARTHA MUKHERJEE

EL EMPERADOR DE TODOS LOS MALES

UNA BIOGRAFÍA DEL
CÁNCER



taurus


Cardiac Management of Oncology Patients

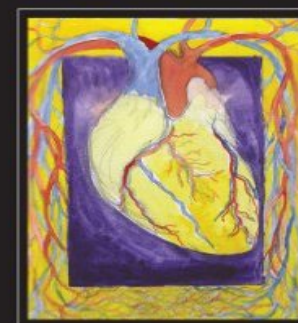
Clinical Handbook
for Cardio-Oncology

Gonzalo Báron-Esquivias
Riccardo Asteggiano
Editors

 Springer

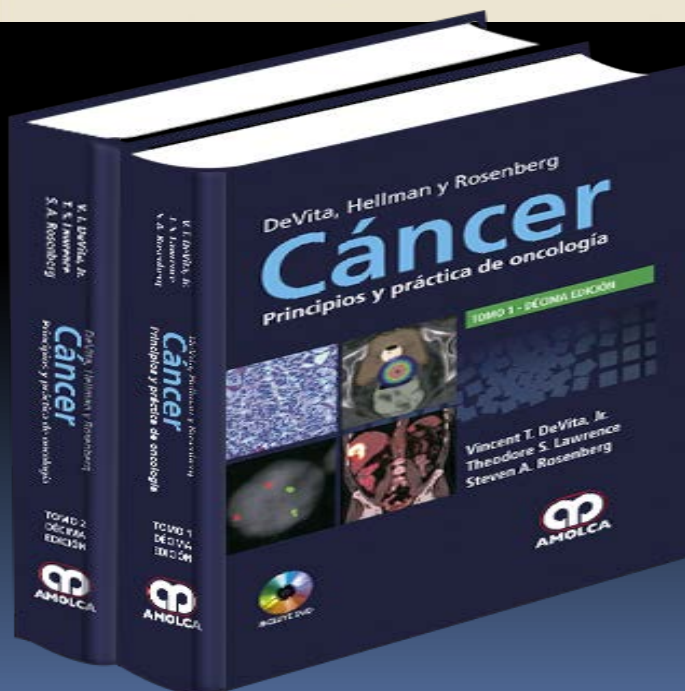
SECOND EDITION

CANCER and the HEART

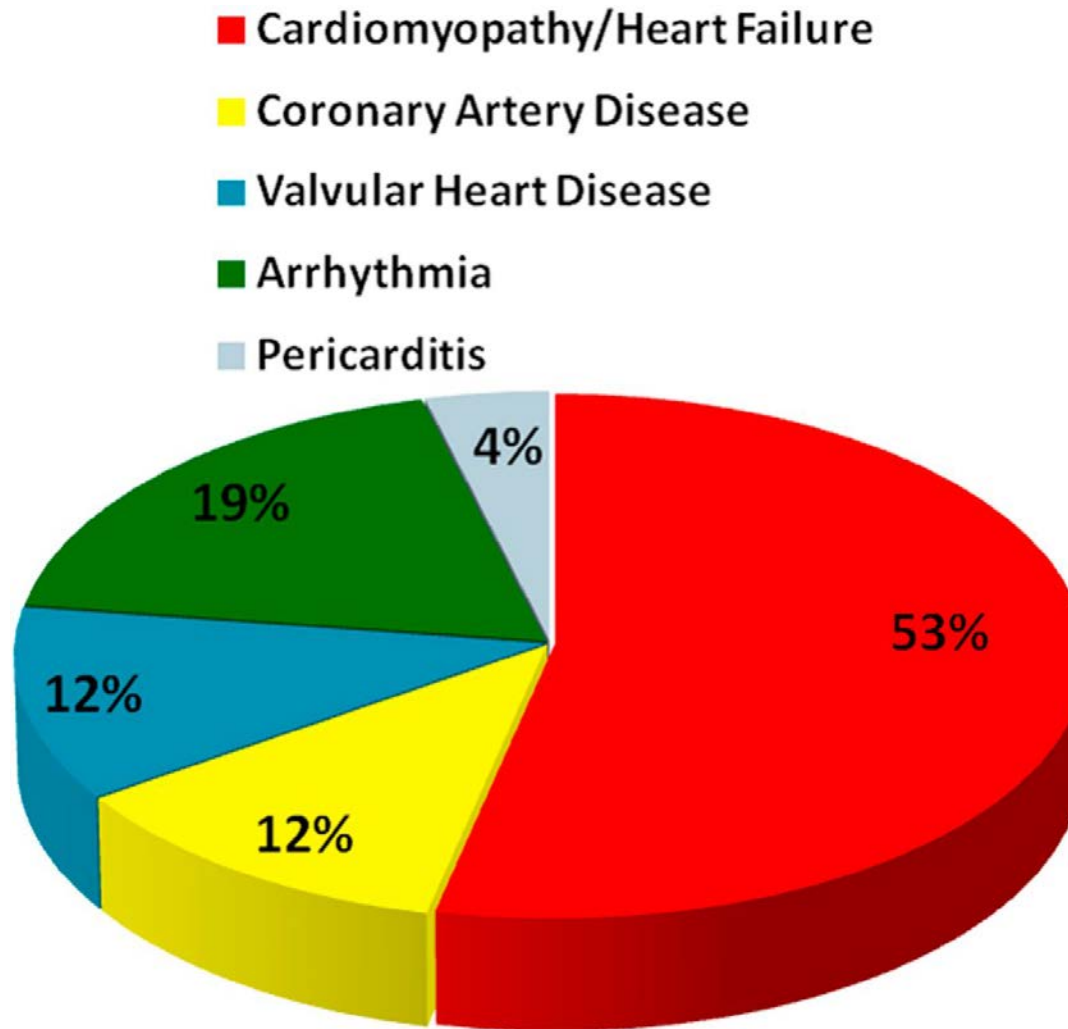


Michael S. Ewer

Edward T.H. Yeh



COMPROMISO CARDIACO SECUNDARIO AL TRATAMIENTO ONCOLOGICO



Michael G. Fradley, and Tomas G. Neilan JACEP
2017;3:151-153

COMPLICACIONES CARDIOVASCULARES DE LA TERAPIA ONCOLOGICA

STAGES OF THE EVALUATION

Risk Stratification

Early Detection
of Injury

Prediction
of Recovery

Detection of Injury
in the Survivor

CLINICAL CONDITIONS TO BE EVALUATED

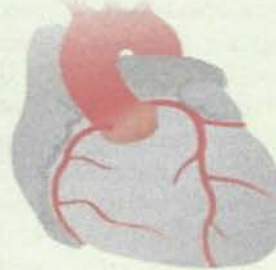
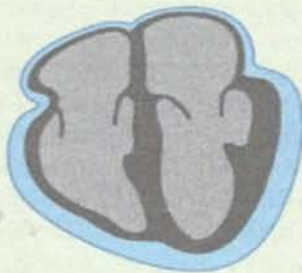
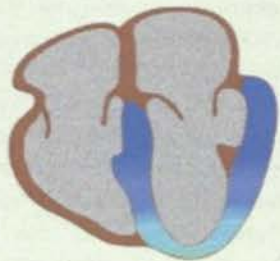
**DISFUNCION
VENTRICULAR IZO**

**ENF.
PERICARDICA**

**ENF.
CORONARIA**

**HIPERTENSION
PULMONAR**

AORTOPATIA



IMAGING MODALITIES ARMAMENTARIUM

ECOCARDIO

**CARDIOLOGIA
NUCLEAR**

**TOMOGRFIA
CARDIACA**

**RESONANCIA
CARDIACA**

Plana, J.C. et al. J Am Coll Cardiol Img. 2018;11(8):1173-86.

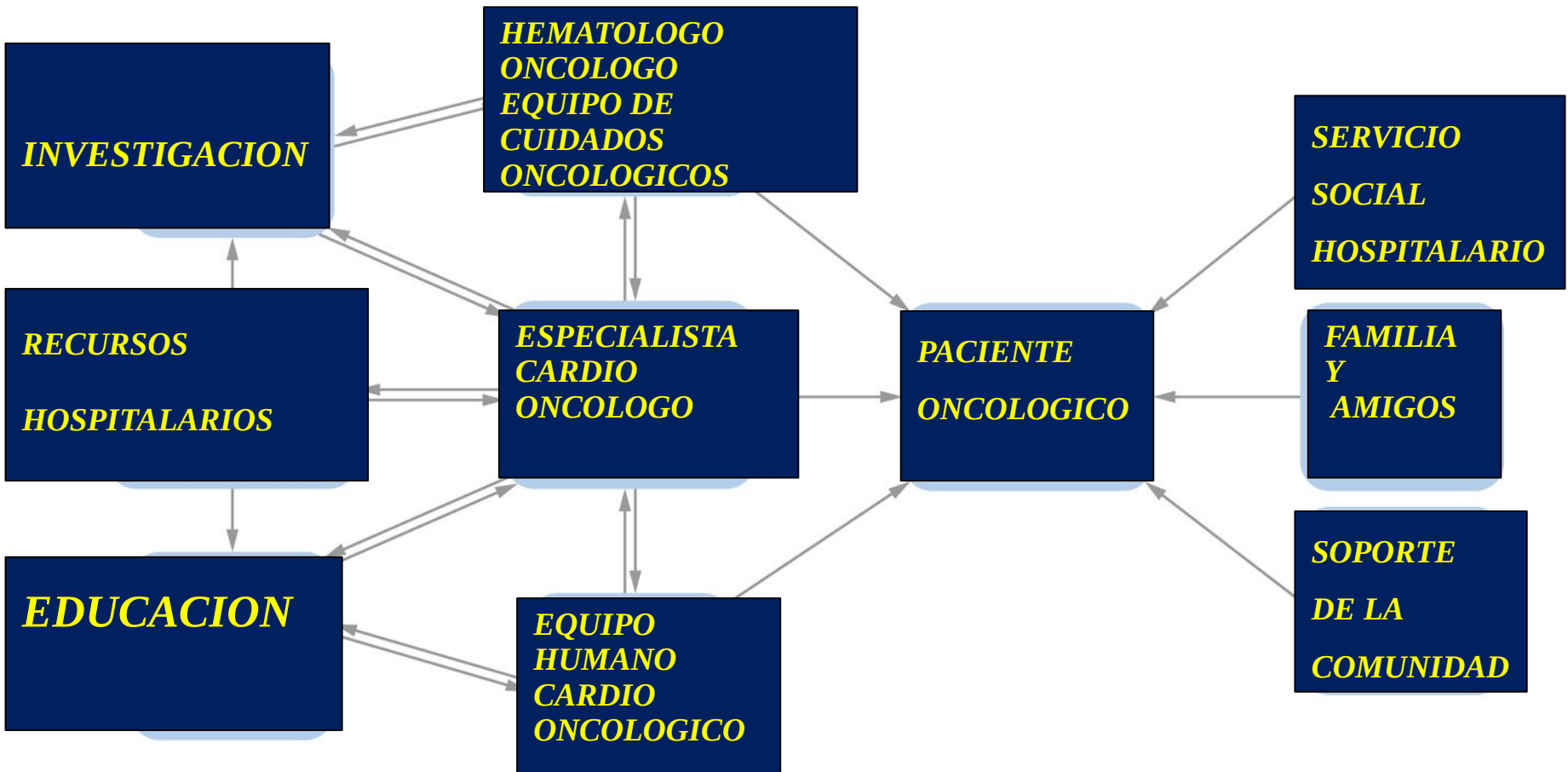
Stages of the evaluation and clinical conditions to be evaluated and imaging modalities available. CAD = coronary artery disease; CMR= cardiovascular magnetic resonance; CT = computed tomography; PET = positron emission tomography.

CARDIO ONCOLOGIA

COMPLICACIONES CARDIOVASCULARES

- 1. *Disfunción Miocárdica e ICC***
- 2. *Enfermedad Coronaria***
- 3. *Enfermedad Valvular***
- 4. *Arritmias, especialmente por prolongación del QT***
- 5. *Hipertensión Arterial***
- 6. *Enfermedad Tromboembólica***
- 7. *Enfermedad Vascular Periférica y "Stroke "***
- 8. *Hipertensión Pulmonar***
- 9. *Pericárdicas***

EQUIPO MULTIDISCIPLINARIO PARA TRATAR A LOS PACIENTES CON CANCER

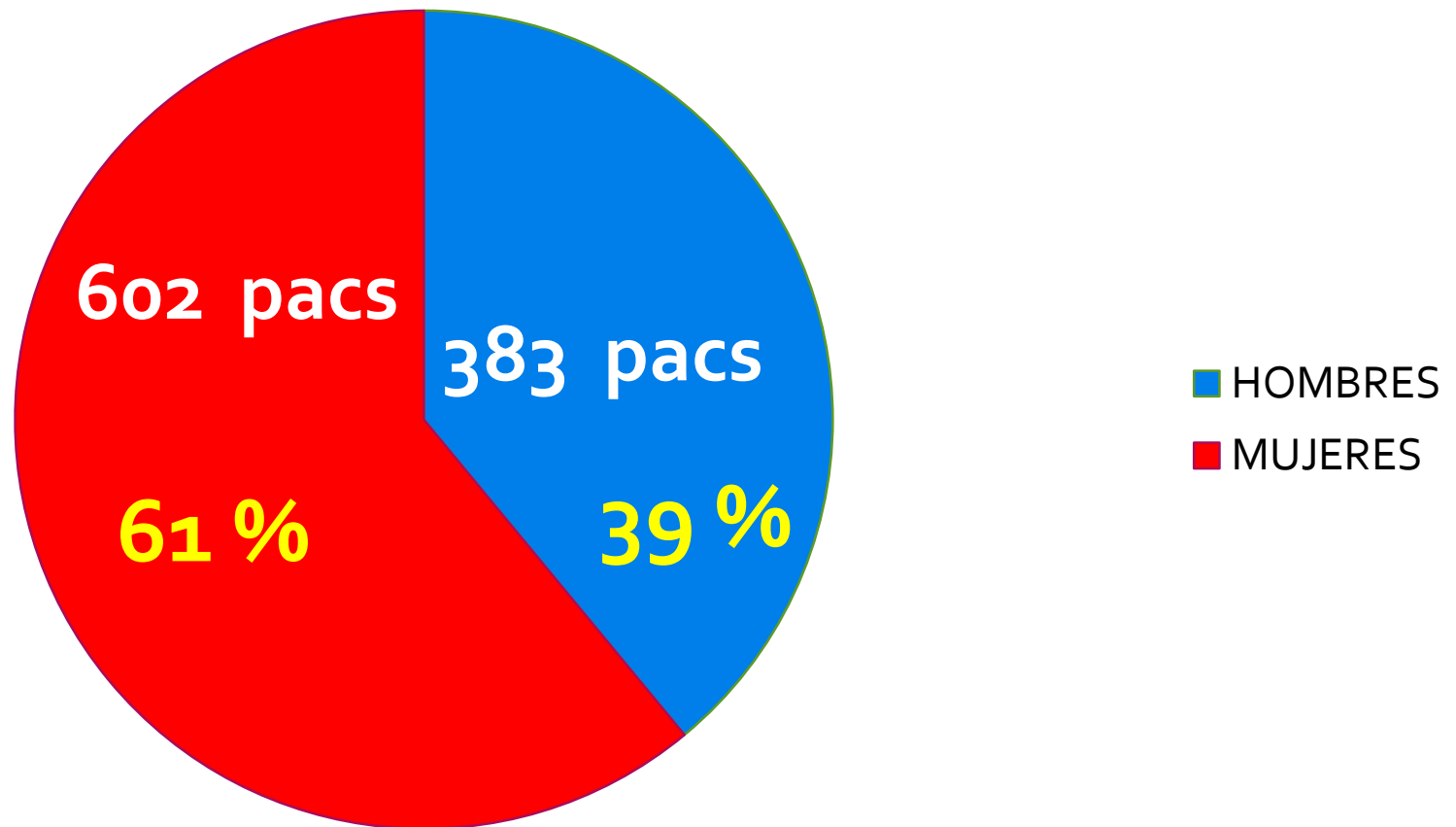


Tochi M. Okwuosa et al. JACC 2015;66:1193-1197



***CARDIOTOXICIDAD POR QUIMIOTERAPIA EN EL INSTITUTO
NACIONAL DE ENFERMEDADES NEOPLASICA (INEN 2012-2016)***

985 Evaluaciones



CARDIOTOXICIDAD POR QUIMIOTERAPIA EN EL INSTITUTO NACIONAL DE ENFERMEDADES NEOPLASICA (INEN 2012-2016)

	2012	2013	2014	2015	2016
<i>ARRITMIAS</i>	72	81	77	90	86
<i>ANGINA DE PECHO</i>	31	35	39	45	34
<i>DERRAME PERICARDICO</i>	15	23	30	32	43
<i>HTA</i>	15	11	12	21	16
<i>ICC</i>	9	6	8	14	11
<i>TROMBOSIS VENOSO</i>	0	3	6	10	7
<i>OTRAS</i>	21	18	26	15	23
<i>TOTAL</i>	163	177	198	227	220

CARDIOTOXICIDAD POR QUIMIOTERAPIA EN EL INSTITUTO NACIONAL DE ENFERMEDADES NEOPLASICA (INEN 2012-2016)

	<i>HOMBRES</i>	<i>MUJERES</i>	<i>TOTAL</i>
<i>ARRITMIAS</i>	119	287	406 / 41.2%
<i>ANGINA DE PECHO</i>	102	82	184 / 18.7%
<i>DERRAME PERICARDICO</i>	60	83	143 / 14.5%
<i>HTA</i>	43	32	45 / 7.6%
<i>ICC</i>	10	38	48 / 4.9%
<i>TROMBOSIS VENOSA</i>	14	12	26 / 2.6%
<i>OTRAS</i>	35	68	103 / 10.5
<i>TOTAL</i>	383	602	985 / 100%

CARDIOTOXICIDAD POR QUIMIOTERAPIA EN EL INSTITUTO NACIONAL DE ENFERMEDADES NEOPLASICA (INEN 2012-2016)

	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>
<i>BRADICARDIA SINUSAL</i>	30	41	50	58	48
<i>TAQUICARDIA SINUSAL</i>	16	18	10	15	13
<i>FIBRILACION AURICULAR</i>	7	9	8	11	14
<i>EXTRASISTOLICA VENTRICULAR</i>	10	6	5	3	8
<i>TPS</i>	4	2	1	1	0
<i>OTRAS</i>	5	5	3	2	3
<i>TOTAL</i>	<i>72</i>	<i>81</i>	<i>77</i>	<i>90</i>	<i>86</i>

CARDIOTOXICIDAD POR QUIMIOTERAPIA EN EL INSTITUTO NACIONAL DE ENFERMEDADES NEOPLASICA (INEN 2012-2016)

	HOMBRES	MUJERES	
<i>BRADICARDIA SINUSAL</i>	45	182	227/56%
<i>TAQUICARDIA SINUSAL</i>	26	46	72/18%
<i>FIBRILACION AURICULAR</i>	27	22	49/12%
<i>EXTRASISTOLIA VENTRICULAR</i>	11	21	32/8%
<i>TPG</i>	5	3	8/2%
<i>OTRAS</i>	5	13	18/4%
<i>TOTAL</i>	119	287	406/100%

Ruiz Enrique. Hariz Med 2017;17(3):24-28

Juan M Aranda, Jr, MD, FACC

UFHealth
UNIVERSITY OF FLORIDA HEALTH

UF | UNIVERSITY of
FLORIDA

Specialty

Medicine

Subspecialty

Cardiovascular Disease

Advanced Heart Failure and Transplant
Cardiology

Clinical Interests

- Cardiac catheterization
- Heart failure - overview
- Heart transplant



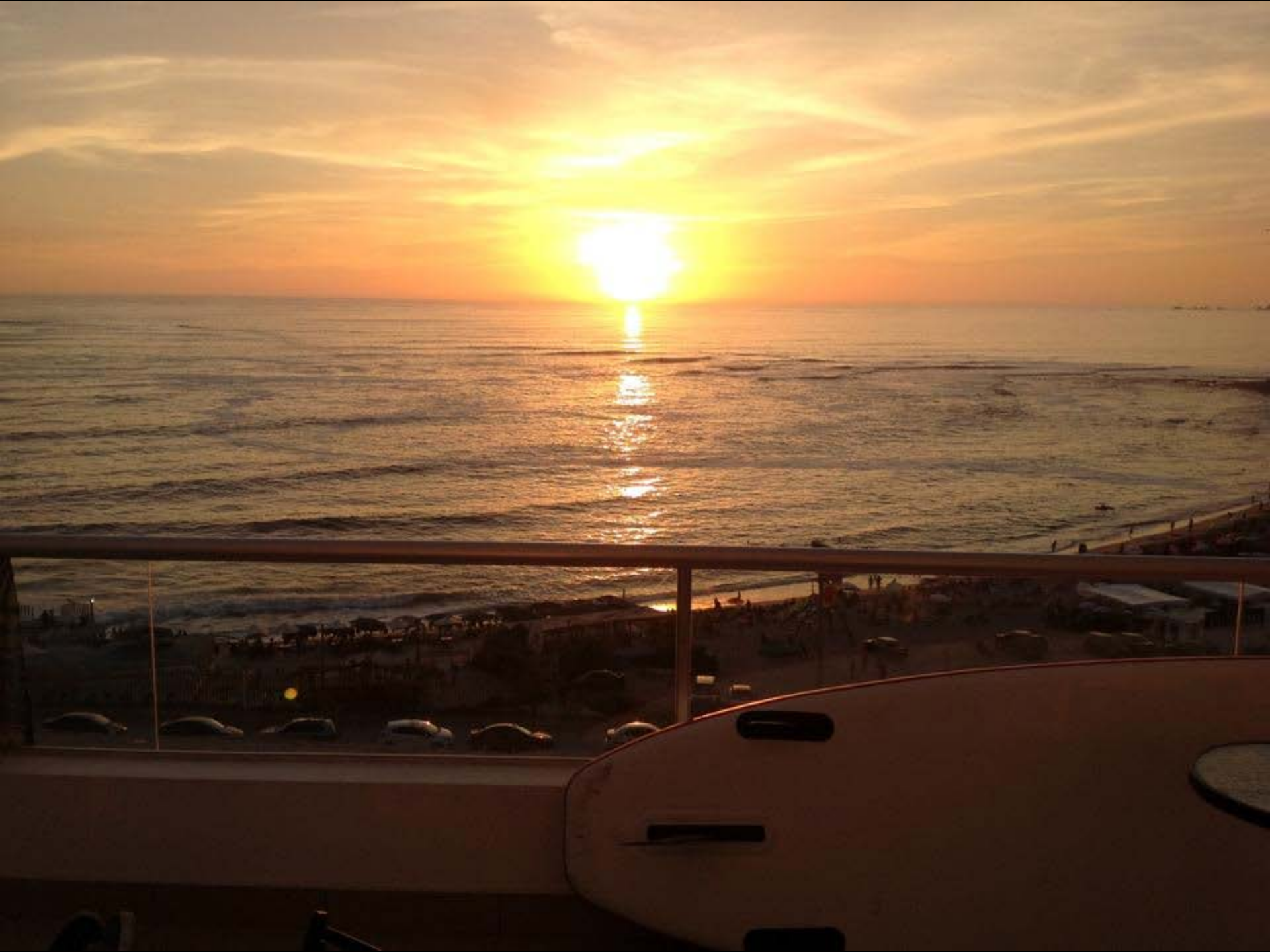
Juan Aranda, MD

A vibrant rainbow arches across a blue sky with wispy clouds, its colors reflecting on the surface of a body of water. The rainbow's colors transition from red on the left to violet on the right. In the bottom right corner, the word "GRACIAS" is written in white, italicized, sans-serif capital letters inside a dark blue rectangular box with a thin green border.

GRACIAS

A vibrant rainbow arches across a blue sky with wispy clouds, its colors reflecting on the surface of a body of water. The rainbow's colors transition from red on the left to violet on the right. In the bottom right corner, the word "GRACIAS" is written in white, italicized, sans-serif capital letters inside a dark blue rectangular box with a thin green border.

GRACIAS





ACC LATIN AMERICA CONFERENCE
in partnership with
SOCIEDAD PERUANA DE CARDIOLOGIA

CARDIO - ONCOLOGIA

Dr. Rodolfo R. Barreto; FACC, FESC

Dr. Juan Aranda; FACC - USA

Lima, PERU: November 16 – 17, 2018



JANUARY 25 – 27, 2019
The Ritz-Carlton · Washington, DC

Advancing the
Cardiovascular Care of the
**Oncology
Patient**

For more
information
and to register visit
ACC.org/CVOncology

The graphic on the right side of the poster features a stylized heart with glowing orange and red energy waves emanating from it. To the left of the heart is a medical device, possibly a catheter or a stent, shown in a blue and white color scheme. The entire graphic is set against a background of blue and white geometric shapes.



**Version
2016**

ESC POCKET GUIDELINES

Committee for Practice Guidelines

To improve the quality of clinical practice and patient care in Europe



CARDIO-ONCO

CANCER TREATMENTS AND
CARDIOVASCULAR TOXICITY

For more information

www.escardio.org/guidelines



EUROPEAN
SOCIETY OF
CARDIOLOGY®