

"Lo mejor de la reunión Virtual Cardio-Oncology Summit. V-COS 2020"

La visión del cardiólogo clínico. PARTE 1

Eduardo Zatarain Nicolás, MD, PhD.

V-COS 2020

- Formato virtual: 1 de Octubre 2020
- Confluencia de la reunión anual de la ICOS con el Cardiotox (La Paz)
- Importante contribución nacional
- Repaso de la última evidencia en Cardio-oncología de la mano de cardiólogos y oncólogos de reconocido prestigio en el ámbito de la Cardio-oncología
- Bloques básicos:
 - Organización de clínicas de cardio-oncología
 - Lo mejor del año
 - Diagnóstico: biomarcadores e imagen
 - Traslación de la innovación a la práctica clínica
 - Inmunoterapia
 - Anticoagulación y arritmias
 - Beneficio del seguimiento y prevención

Symposium directors

Dr. Teresa López-Fernández, Madrid, ES

Dr. Susan Dent, Durham, US

Dr. Daniel J. Lenihan, St. Louis, US

Dr. José Luis López Sendón, Madrid, ES

Scientific committee

Dr. Anne Blaes, Minneapolis, US

Dr. Christine Brezden-Masley, Toronto, CA

Dr. Joseph Carver, Philadelphia, US

Dr. Susan Dent, Durham, US

Dr. Michael Fradley, Philadelphia, US

Dr. Daniel J. Lenihan, St. Louis, US

Dr. José Luis López Sendón, Madrid, ES

Dr. Teresa López-Fernández, Madrid, ES

Dr. Alexander Lyon, London, UK

Dr. Susannah Stanway, London, UK

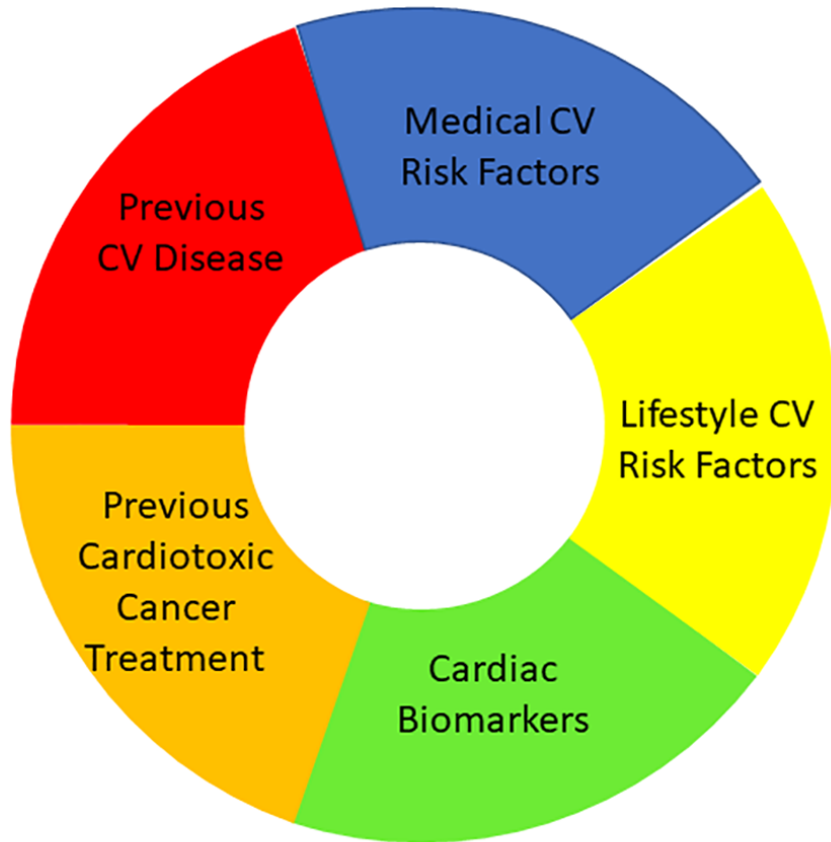
Dr. Sebastian Szmít, Warsaw, PL

Dr. Dinesh Thavendiranathan, Toronto, CA

Programas de cardio-oncología: Lo esencial, lo adecuado y lo óptimo.



Programas de cardio-oncología: Lo esencial, lo adecuado y lo óptimo.



Baseline CV Risk Assessment Checklist

Cardiac history
Cancer treatment history
CV risk factors

Blood pressure
HbA1c
Cholesterol profile

*Cardiac troponin**
*BNP or NT-proBNP**

ECG

Echocardiogram

Programas de cardio-oncología: Lo esencial, lo adecuado y lo óptimo.

HFA European Society of Cardiology | **ESC** Council Cardio-Oncology | **Cardio Oncology**

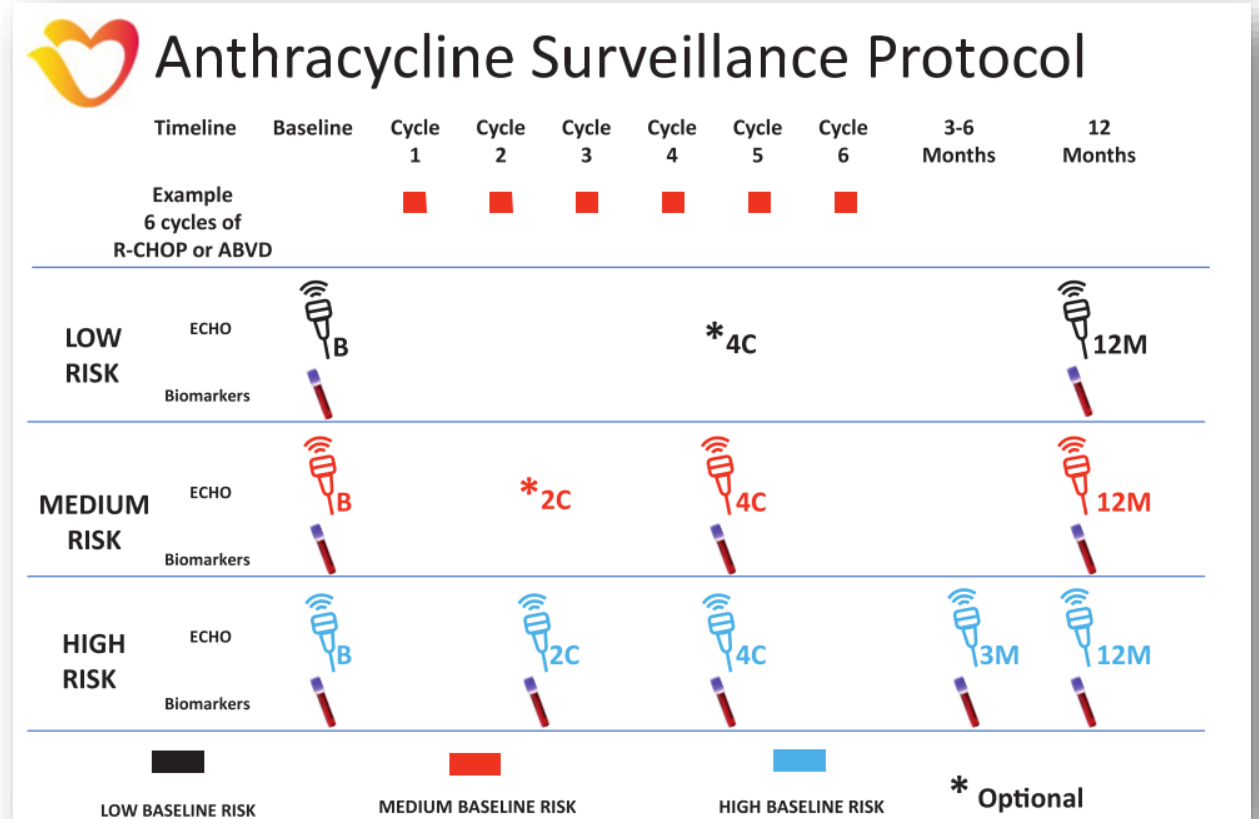
BASELINE CARDIO-ONCOLOGY RISK ASSESSMENT

ANTHRACYCLINE CHEMOTHERAPY

Risk Factor	Risk Factor Present	Score	Level of Evidence
Previous cardiovascular disease			
Heart failure or cardiomyopathy		VERY HIGH	B
Severe valvular heart disease		HIGH	C
Myocardial infarction or previous coronary revascularisation (PCI or CABG)		HIGH	C
Stable angina		HIGH	C
Baseline LVEF <50%		HIGH	B
Borderline LVEF 50-54%		MEDIUM ²	C
Cardiac Biomarkers (where available)			
Elevated baseline troponin*		MEDIUM ²	C
Elevated baseline BNP or NT-proBNP*		MEDIUM ²	C
Demographic and cardiovascular risk factors			
Age ≥80 years		HIGH	B
Age 65-79 years		MEDIUM ²	B
Hypertension ^β		MEDIUM ²	B
Diabetes mellitus ⁺		MEDIUM ²	C
Chronic kidney disease ^Δ		MEDIUM ²	C
Previous cardiotoxic cancer treatment			
Previous anthracycline exposure		HIGH	B
Prior radiotherapy to left chest or mediastinum		HIGH	C
Previous non-anthracycline-based chemotherapy		MEDIUM ²	C
Lifestyle risk factors			
Current smoker or significant smoking history		MEDIUM ²	C
Obesity (BMI>30)		MEDIUM ²	C
RISK LEVEL			

LEGEND
 BMI = Body mass index
 BNP = Brain natriuretic peptide
 CABG = Coronary artery bypass graft
 LVEF = Left ventricular ejection fraction
 NT-proBNP = N-terminal pro-brain natriuretic peptide
 * Elevated above the upper limit of normal for local laboratory reference range or on treatment
^β Systolic blood pressure (BP) >140mm Hg or diastolic BP >90mm Hg
⁺ HbA1c >7.0% or >53mmol/mol or on treatment
^Δ Estimated glomerular filtration rate <60ml/min/1.73m²

RISK LEVEL
 LOW RISK = no risk factor OR one MEDIUM1 RF
 MEDIUM RISK = MEDIUM RFs with a total of 2-4 points
 HIGH RISK = MEDIUM RFs with a total of 25 points OR any HIGH RF
 VERY HIGH RISK = any VERY HIGH RF



Programas de cardio-oncología: Lo esencial, lo adecuado y lo óptimo.

- COMUNICACIÓN
 - Adquisición de lenguaje común
 - Para el cardiólogo: Familiarizarse con los tratamientos, indicaciones, beneficio pronóstico, riesgo
 - Para el oncólogo: Entender lo que la cardiología moderna pueda contribuir, familiarizarse con la clínica-diagnóstico y pronóstico de la enfermedad cardiovascular.
- VELOCIDAD DE TRANSMISIÓN DE LA INFORMACIÓN
- TRABAJO EN EQUIPO
- EDUCACIÓN

- MÁXIMA: NO SUSPENDER TRATAMIENTOS EFICACES CONTRA EL CÁNCER SALVO QUE SEA ABSOLUTAMENTE NECESARIO

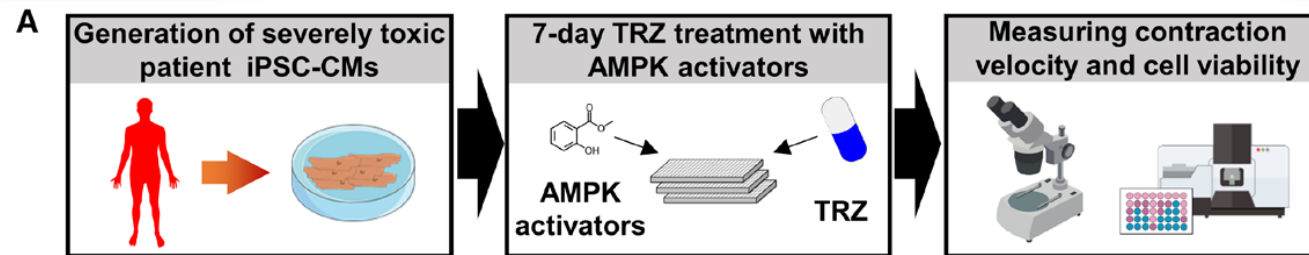
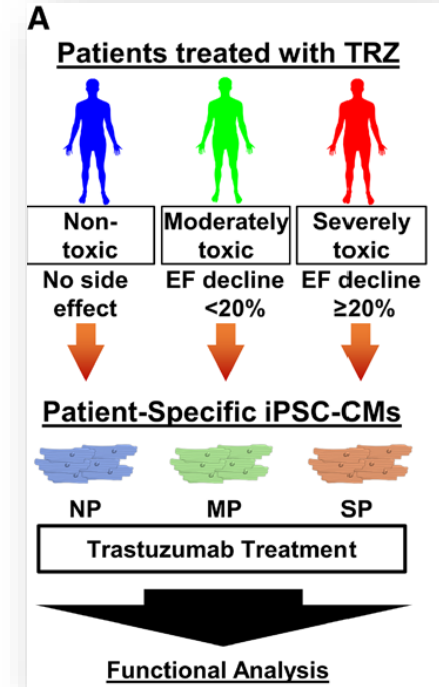
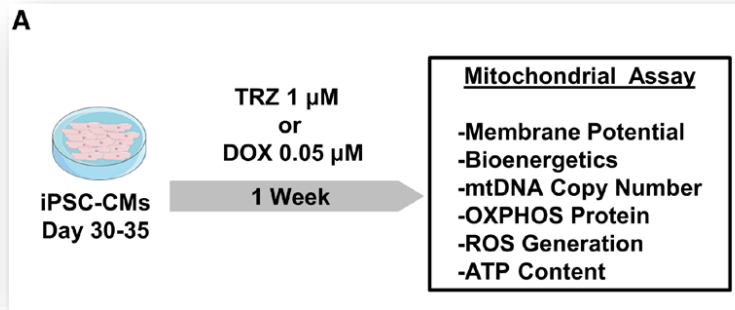
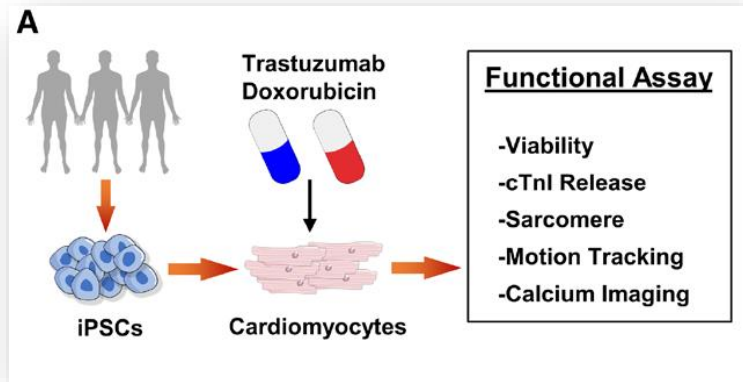
Novedades en ciencia básica COH 2019-2020

Circulation

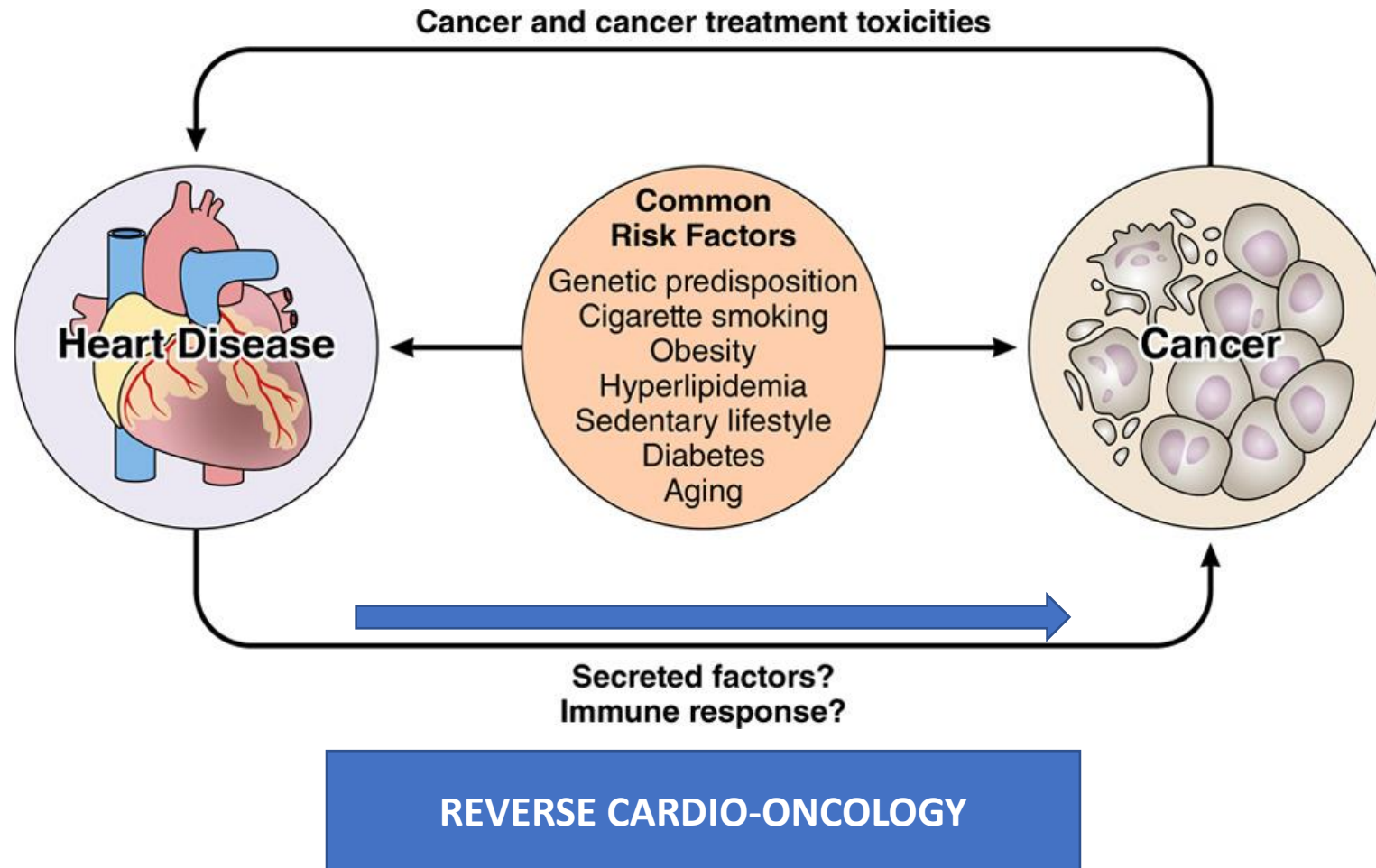
ORIGINAL RESEARCH ARTICLE



Human-Induced Pluripotent Stem Cell Model of Trastuzumab-Induced Cardiac Dysfunction in Patients With Breast Cancer



Novedades en ciencia básica COH 2019-2020

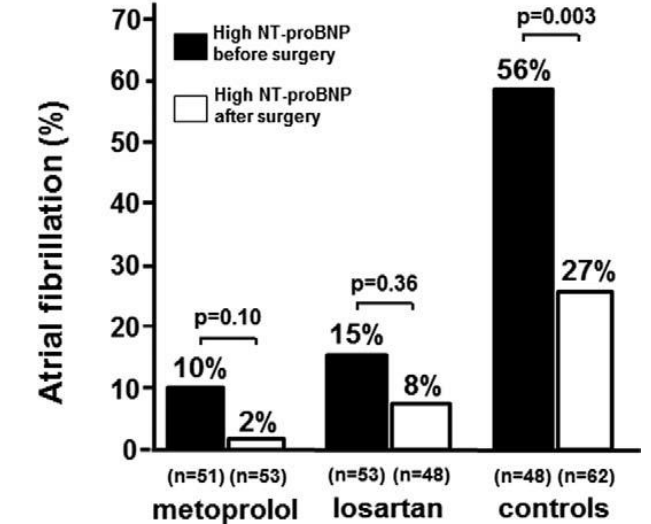
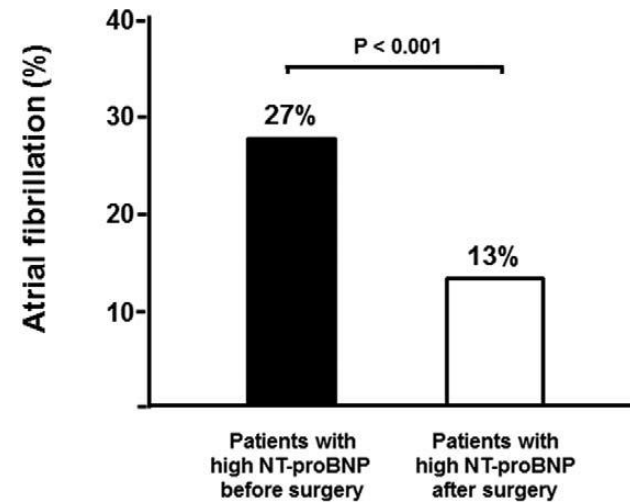
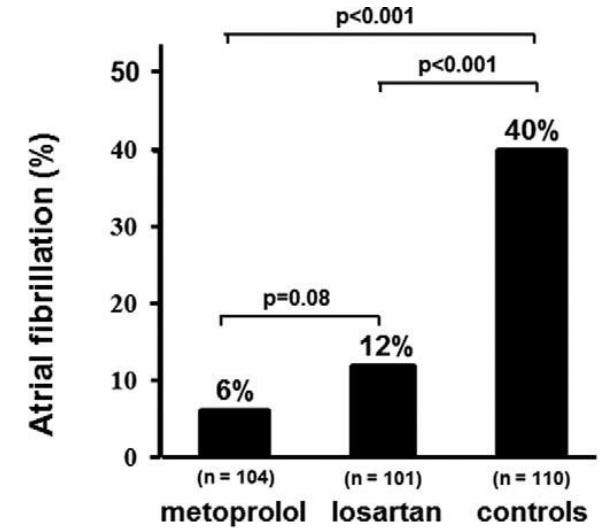
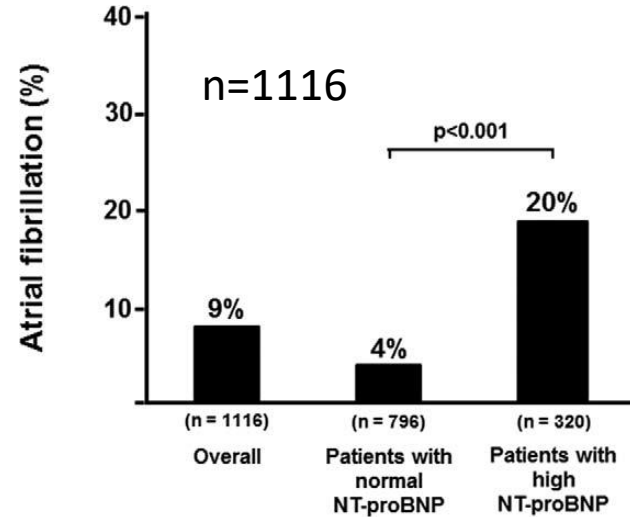
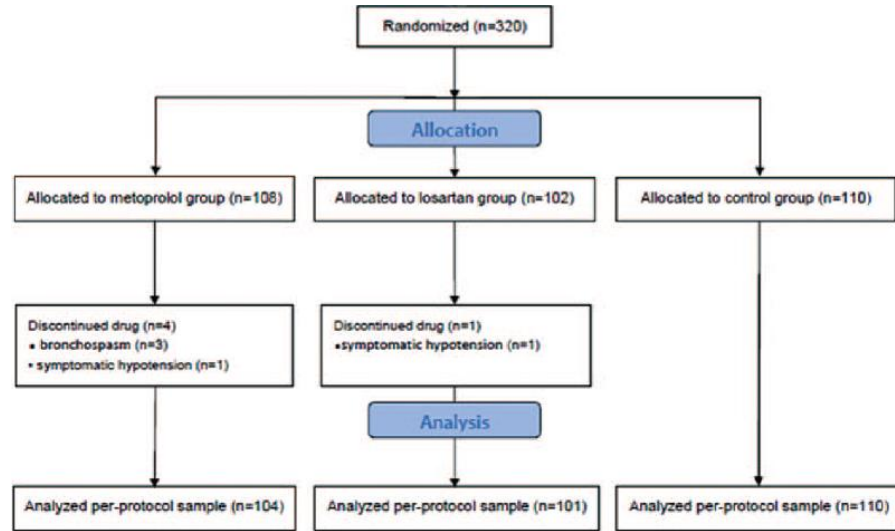


Biomarcadores e Imagen

Prevention of Atrial Fibrillation in High-risk Patients Undergoing Lung Cancer Surgery

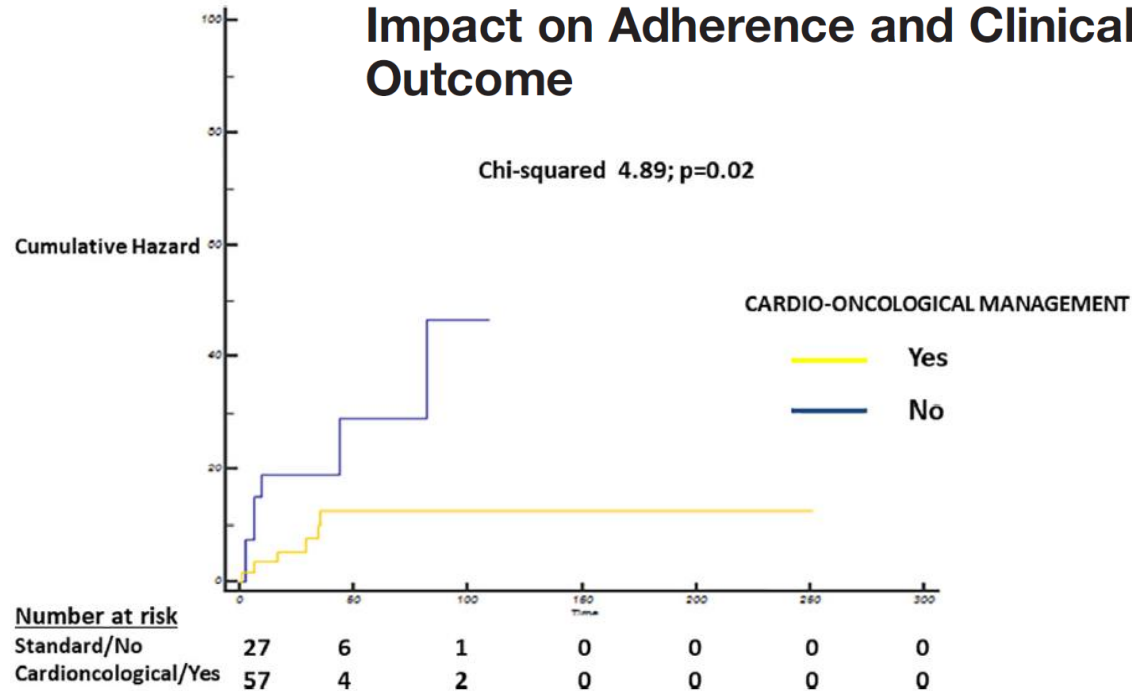
The PRESAGE Trial

Daniela Cardinale, MD, PhD, FESC,* Maria T. Sandri, MD,† Alessandro Colombo, MD,‡
 Michela Salvatici, DSc,† Ines Tedeschi, MSc,‡ Giulia Bacchiani, MD,‡ Marta Beggiano, MD,‡
 Carlo A. Meroni, MD,‡ Maurizio Civelli, MD,‡ Giuseppina Lamantia, MD,‡ Nicola Colombo, MD,‡
 Fabrizio Veglia, PhD,§ Monica Casiraghi, MD,|| Lorenzo Spaggiari, MD, PhD,¶
 Marco Venturino, MD,** and Carlo M. Cipolla, MD‡



Biomarcadores e imagen

Cardioncological Approach for Trastuzumab Therapy in Breast Cancer Patients With Cardiotoxicity: Impact on Adherence and Clinical Outcome

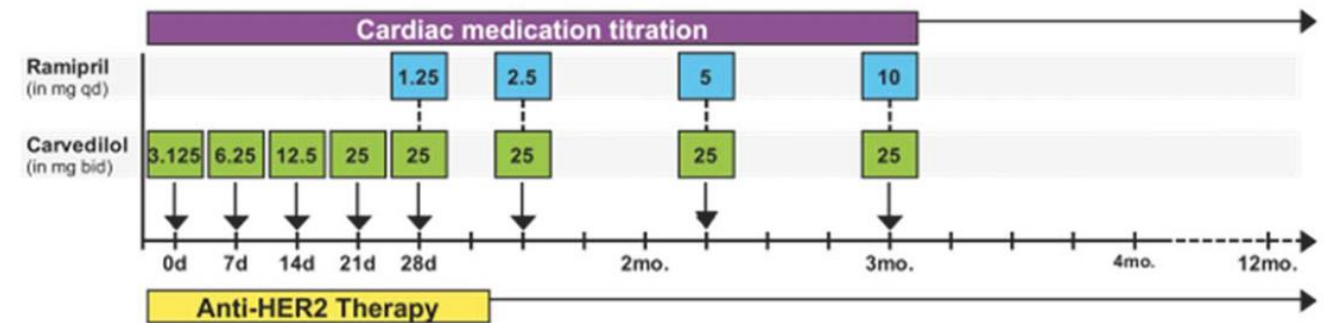


The Oncologist®

Breast Cancer

SAFE-HEaRt: Rationale and Design of a Pilot Study Investigating Cardiac Safety of HER2 Targeted Therapy in Patients with HER2-Positive Breast Cancer and Reduced Left Ventricular Function

FILIPA LYNCE,^{a,†} ANA BARAC,^{a,b,c,†} MING T. TAN,^a FEDERICO M. ASCH,^{b,c} KAREN L. SMITH,^d CHAU DANG,^e CLAUDINE ISAACS,^a SANDRA M. SWAIN^a



Biomarcadores e Imagen

CLINICAL INVESTIGATIONS

NORMATIVE ECHOCARDIOGRAPHIC VALUES FOR LV SIZE AND FUNCTION AROUND THE WORLD

Similarities and Differences in Left Ventricular Size and Function among Races and Nationalities: Results of the World Alliance Societies of Echocardiography Normal Values Study



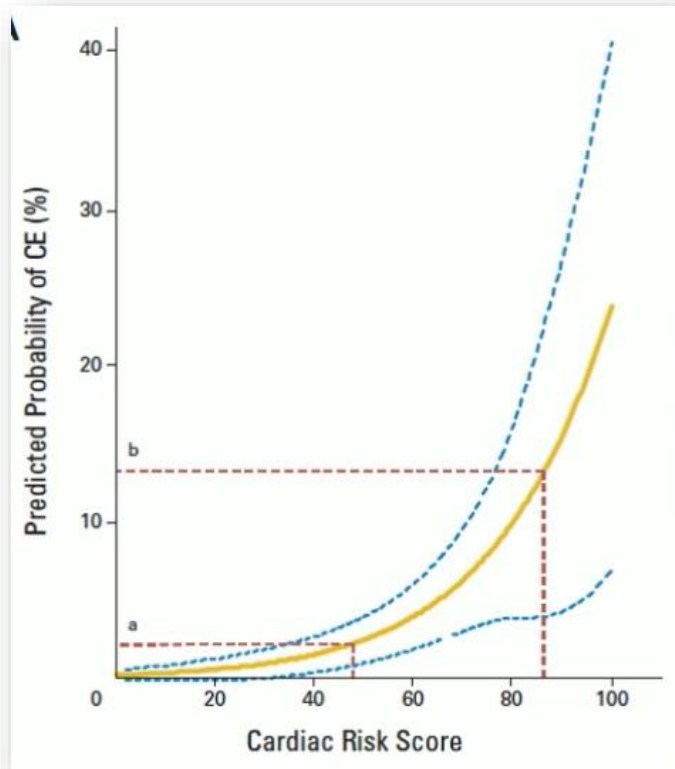
Federico M. Asch, MD, FASE, Tatsuya Miyoshi, MD, Karima Addetia, MD, FASE, Rodolfo Citro, MD, Masao Daimon, MD, PhD, Sameer Desale, MS, Pedro Gutierrez Fajardo, MD, FASE, Ravi R. Kasliwal, MD, FASE, James N. Kirkpatrick, MD, FASE, Mark J. Monaghan, PhD, Denisa Muraru, MD, FASE, Kofo O. Ogunyankin, MD, FASE, Seung Woo Park, MD, Ricardo E. Ronderos, MD, FASE, Anita Sadeghpour, MD, FASE, Gregory M. Scalia, MD, FASE, Masaaki Takeuchi, MD, PhD, FASE, Wendy Tsang, MD, Edwin S. Tucay, MD, FASE, Ana Clara Tude Rodrigues, MD, Amuthan Vivekanandan, MD, DM, FASE, Yun Zhang, MD, FASE, Alexandra Blitz, and Roberto M. Lang, MD, FASE, on Behalf of the WASE Investigators, *Washington, District of Columbia; Chicago, Illinois; Salerno and Padua, Italy; Tokyo and Kitakyushu, Japan; Guadalajara, Mexico; Gurgaon and Madurai, India; Seattle, Washington; London, United Kingdom; Lagos, Nigeria; Seoul, Korea; Buenos Aires, Argentina; Tehran, Iran; Brisbane, Australia; Toronto, Ontario, Canada; Quezon City, Philippines; São Paulo, Brazil; Shandong, China; and Unterschleissheim, Germany*

Table 2 Normal ranges for the global WASE population by gender and its comparison with 2015 ASE/EACVI guidelines

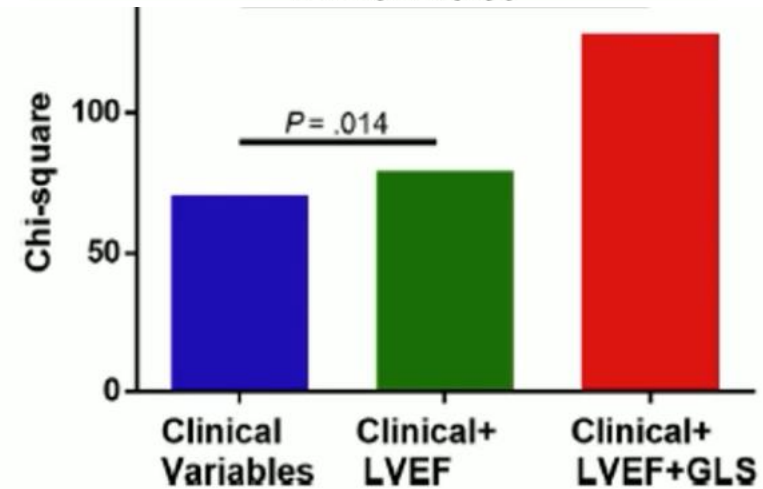
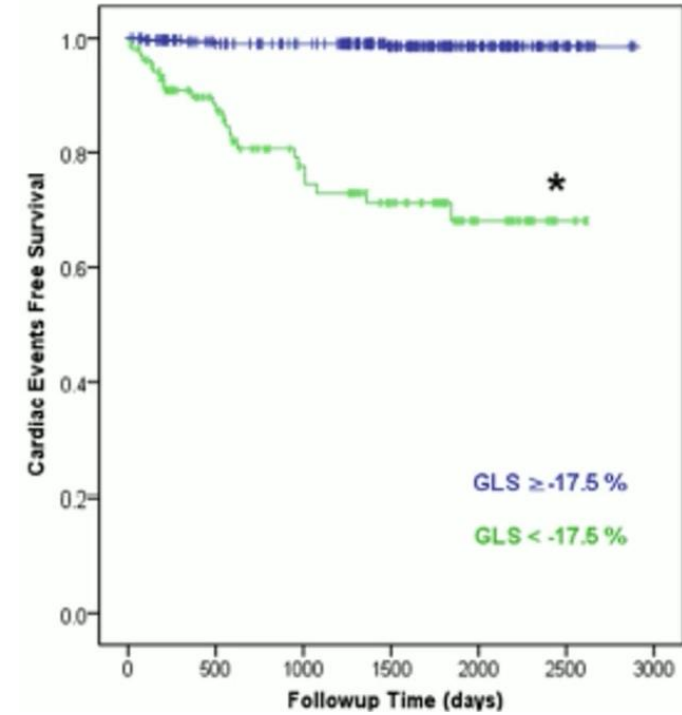
Variable	WASE, LLN to ULN			Guidelines	
	Male	Female	P	Male	Female
LVIDd, mm	36 to 56	33 to 51	<.0001	42 to 58	38 to 52
Indexed LVIDd, mm/m ²	19 to 30	20 to 31	<.0001	22 to 30	23 to 31
LVIDs, mm	22 to 37	21 to 34	<.0001	25 to 40	22 to 35
Indexed LVIDs, mm/m ²	12 to 20	12 to 21	<.0001	13 to 21	13 to 21
IVSd, mm	6 to 12	5 to 10	<.0001	6 to 10	6 to 9
LVPWd, mm	6 to 11	5 to 10	<.0001	6 to 10	6 to 9
LV mass, g	74 to 204	55 to 148	<.0001	88 to 224	67 to 162
LV mass index, g/m ²	42 to 101	36 to 85	<.0001	49 to 115	43 to 95
LVEDV, mL	61 to 165	47 to 122	<.0001	62 to 150	46 to 106
LVEDVI, mL/m ²	34 to 80	31 to 70	<.0001	34 to 74	29 to 61
LVESV, mL	21 to 65	17 to 47	<.0001	21 to 61	14 to 42
LVESVI, mL/m ²	12 to 32	11 to 28	<.0001	11 to 31	8 to 24
LVEF, %	57 to 68	58 to 69	<.0001	52 to 72	54 to 74
LV GLS, %	-17 to -24	-18 to -26	<.0001	NA	NA

IVSd, Interventricular septal dimension in diastole; LVEDVI, LVEDV index; LVESV, LV end-systolic volume; LVESVI, LVESV index; LVIDd, LV internal dimension at end-diastole; LVIDs, LV internal dimension at end-systole; LVPWd, LV posterior wall dimension in diastole; NA, not applicable.

Biomarcadores e Imagen



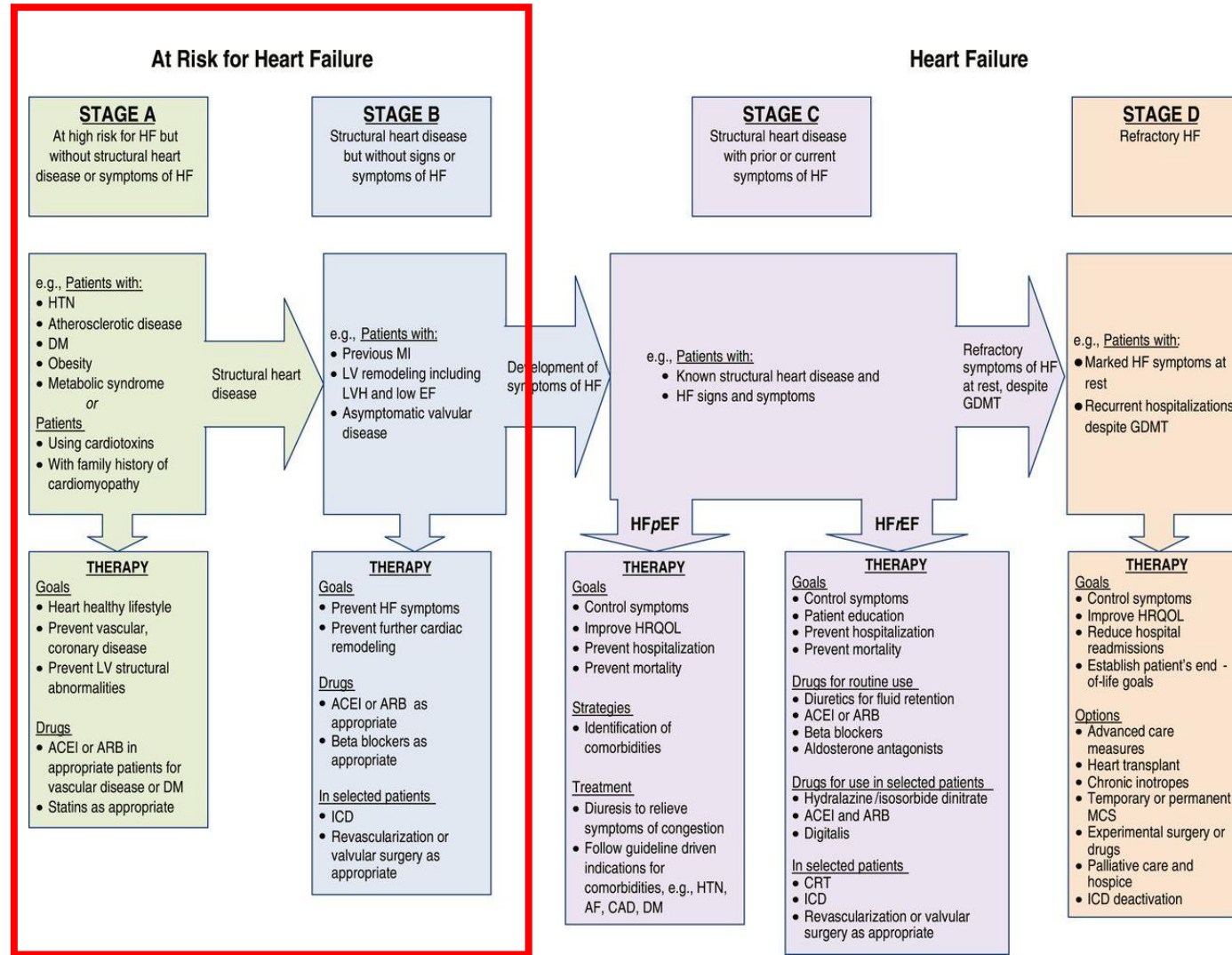
$$\frac{[7.0 + (0.04 \times \text{Age in years}) - (0.1 \times \text{Baseline percent LVEF})] \times 100}{4.76}$$



Liderando el conocimiento del mañana

CardioAdvancedForum'20

Biomarcadores e Imagen



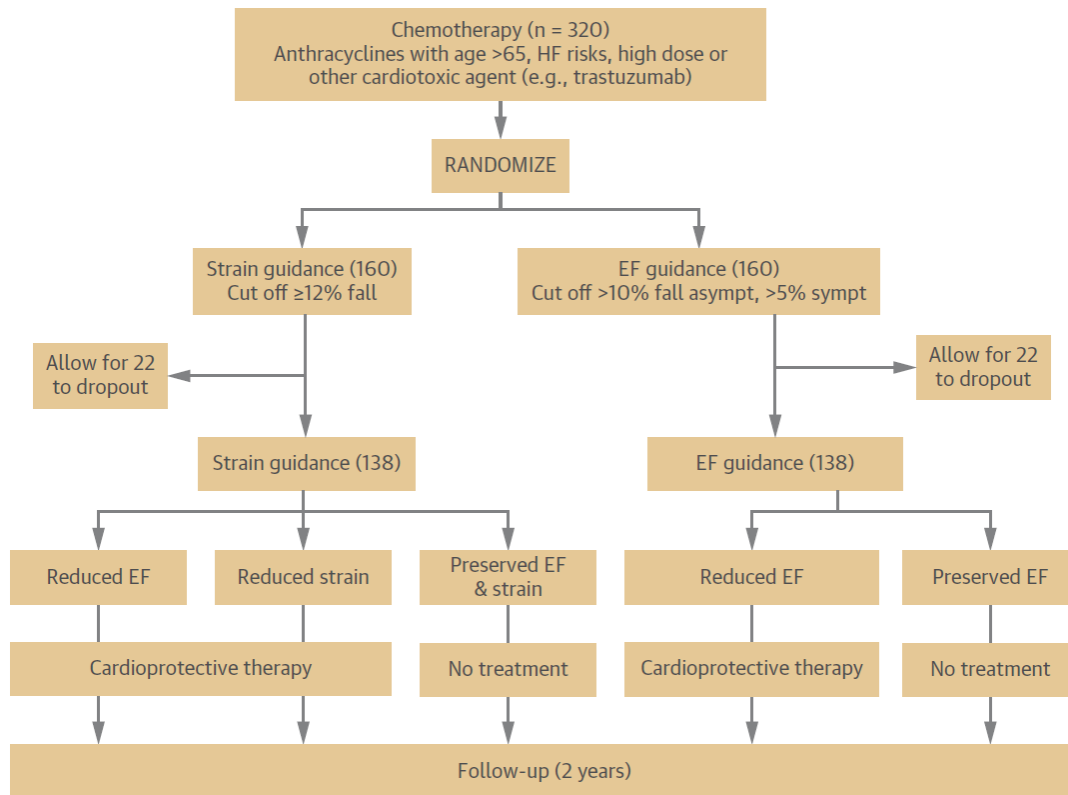
Biomarcadores e imagen


Rationale and Design of the Strain Surveillance of Chemotherapy for Improving Cardiovascular Outcomes

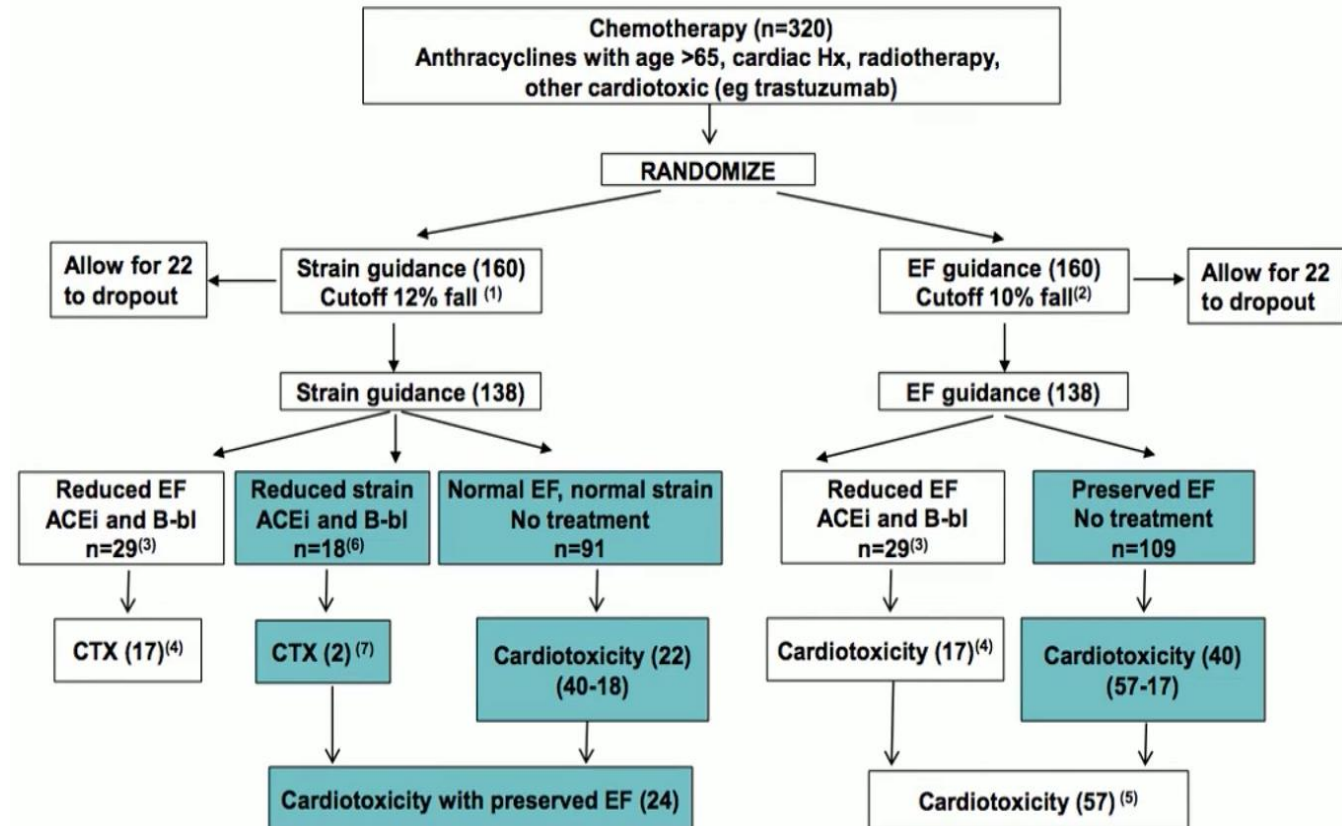


The SUCCOUR Trial

Tomoko Negishi, MD,^a Paaladinesh Thavendiranathan, MD, SM,^b Kazuaki Negishi, MD, PhD,^a Thomas H. Marwick, MBBS, PhD, MPH,^{a,c} on behalf of the SUCCOUR investigators



Resultados a 1 año  ESC 365



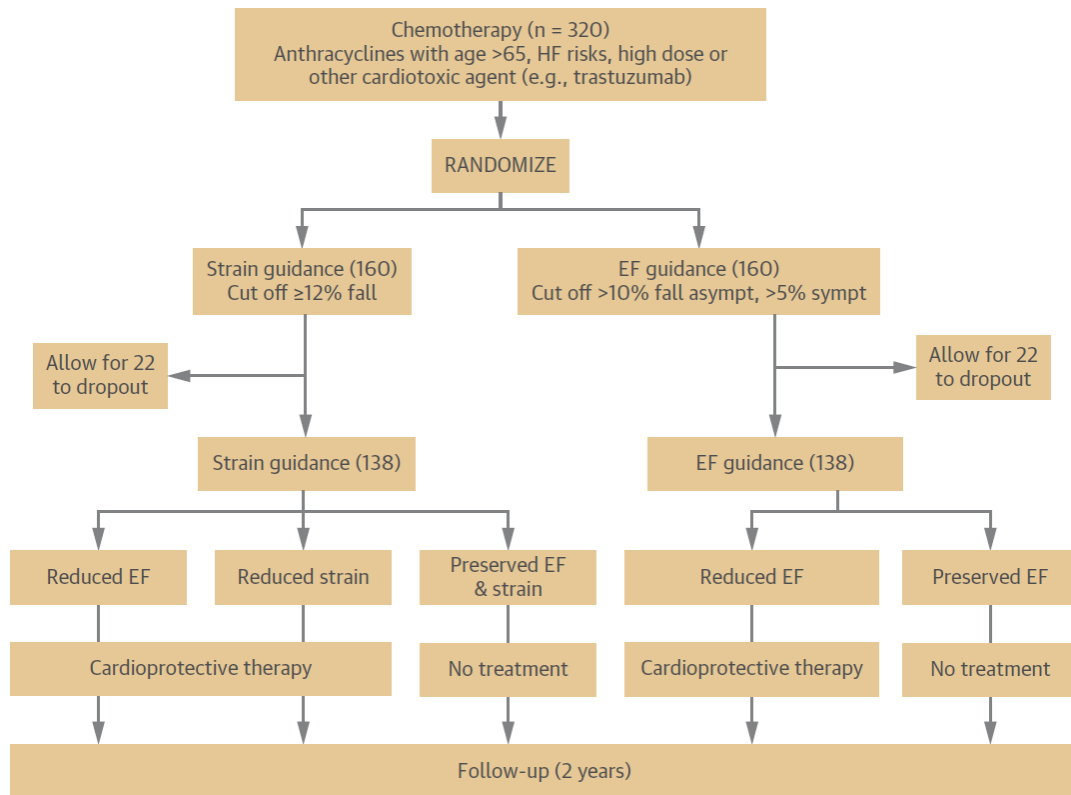
Biomarcadores e imagen


Rationale and Design of the Strain Surveillance of Chemotherapy for Improving Cardiovascular Outcomes

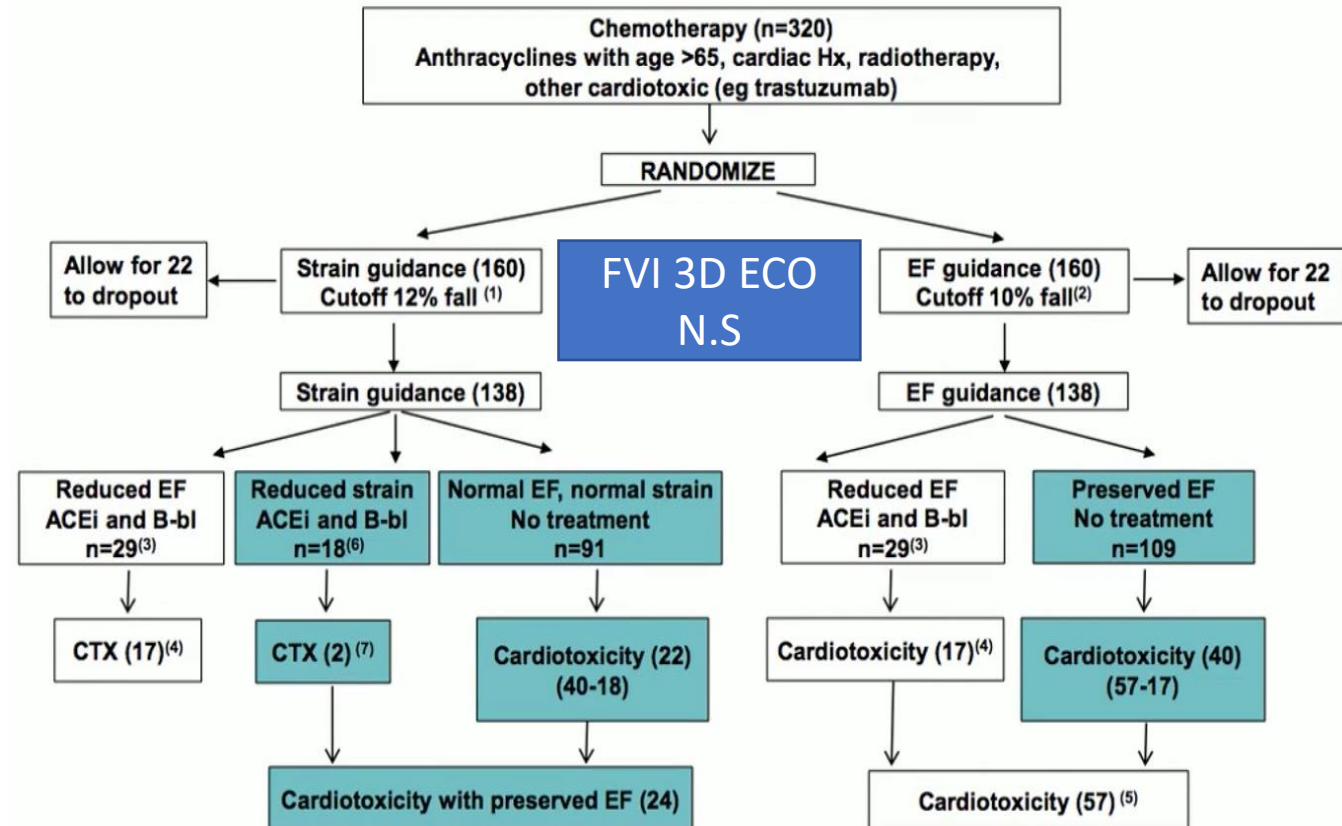


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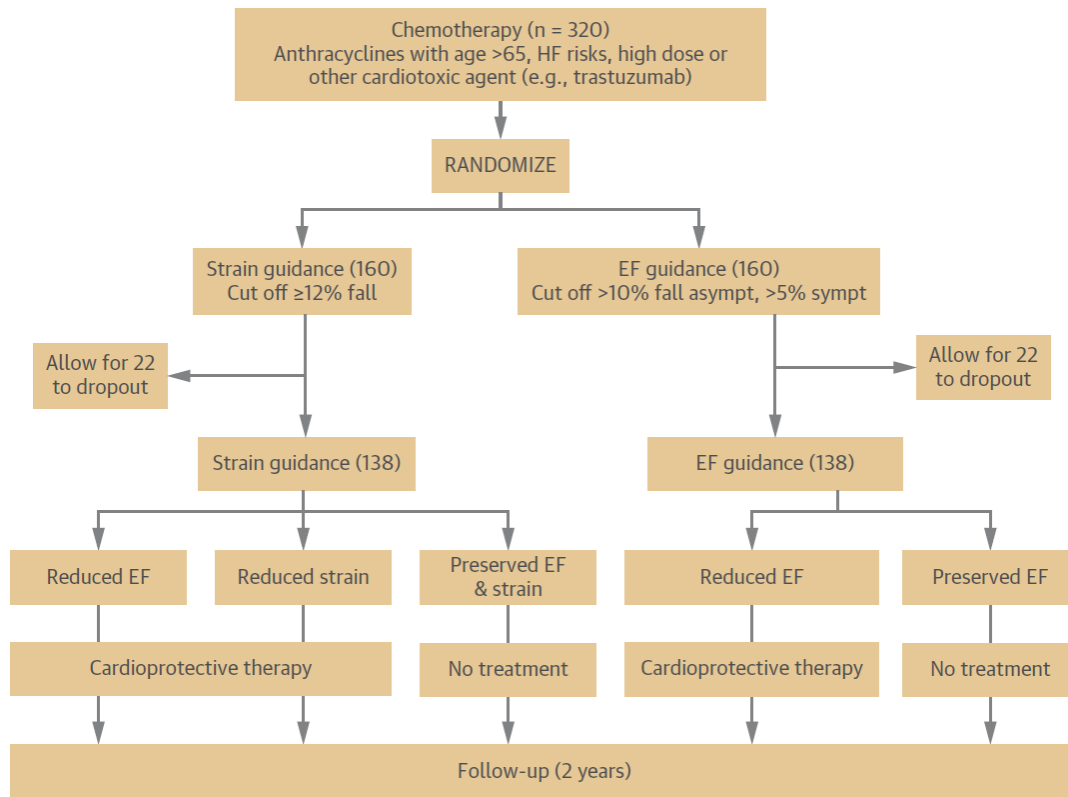



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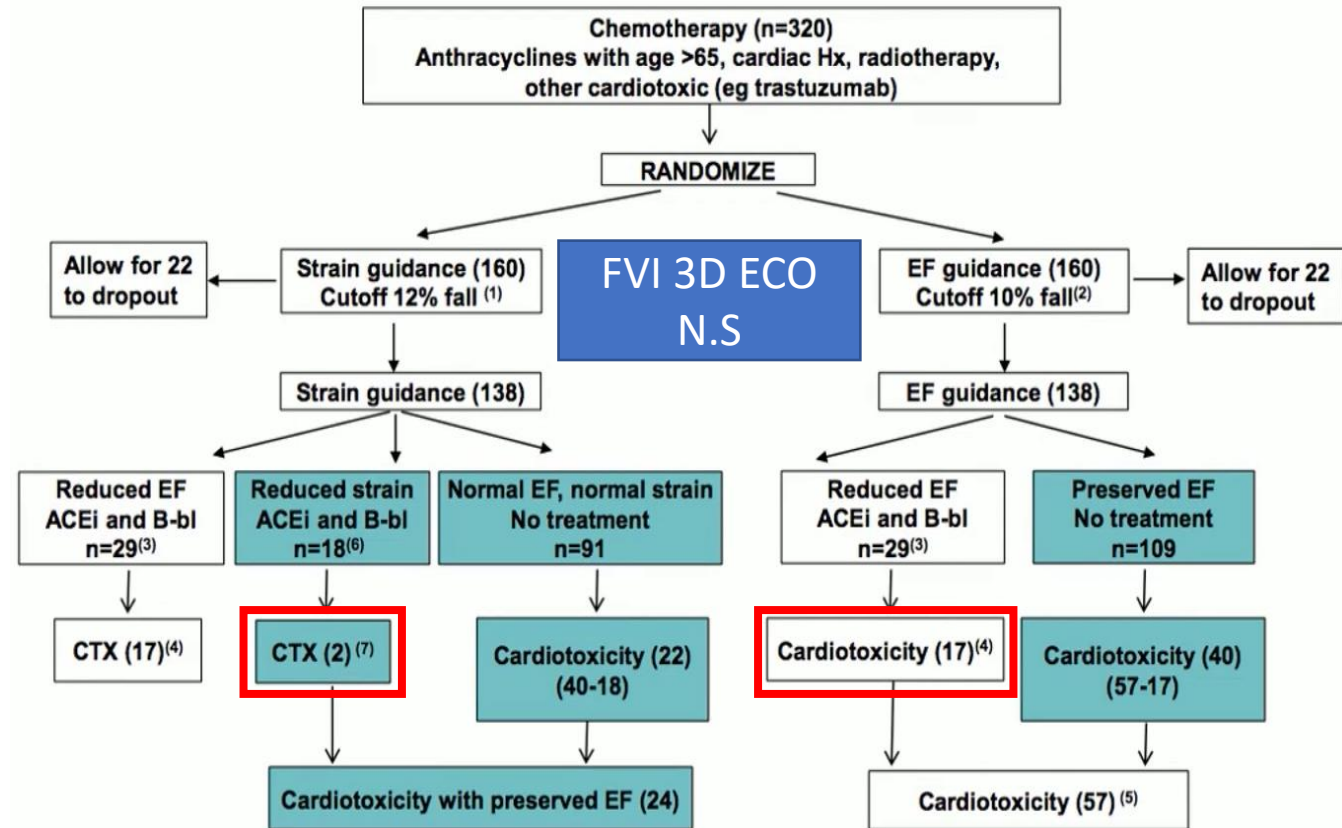
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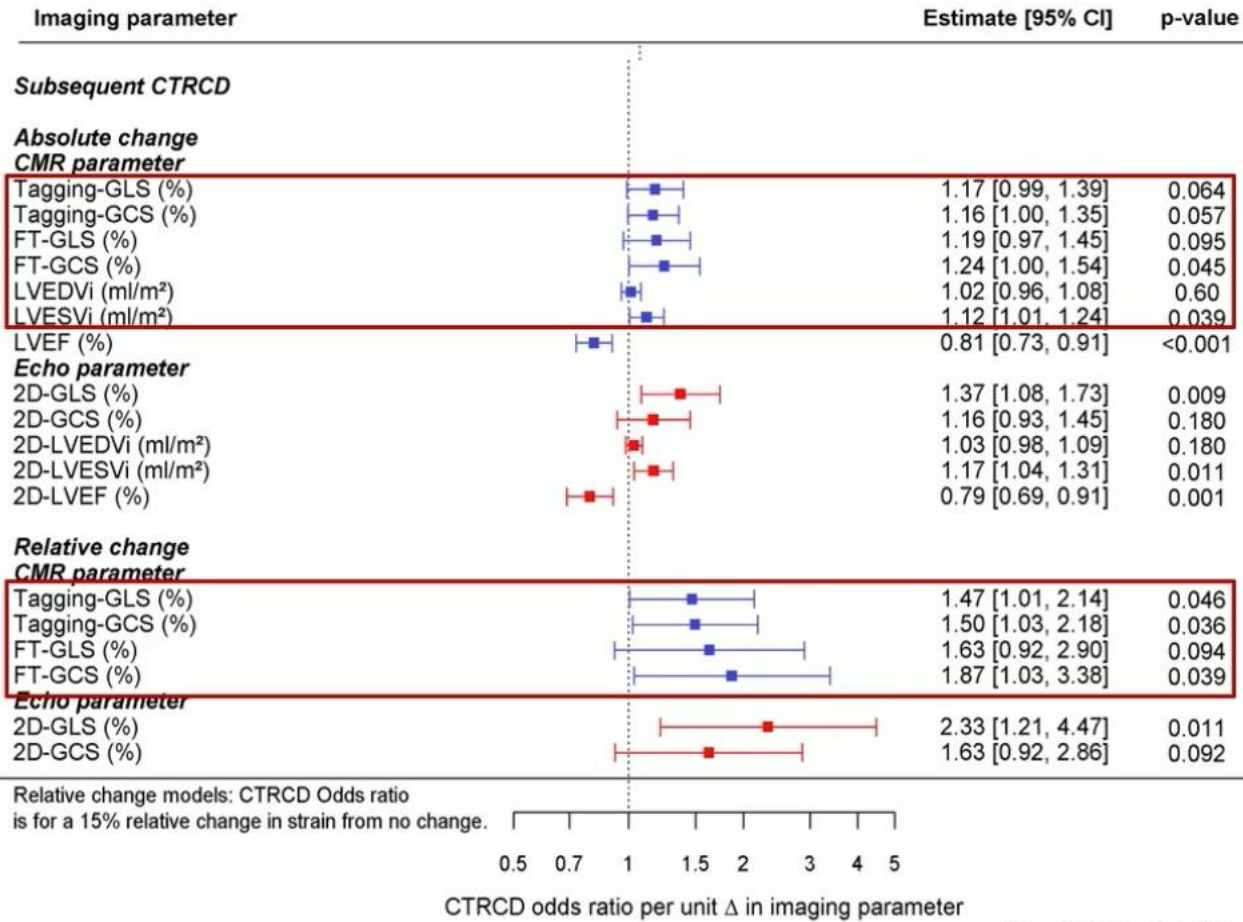
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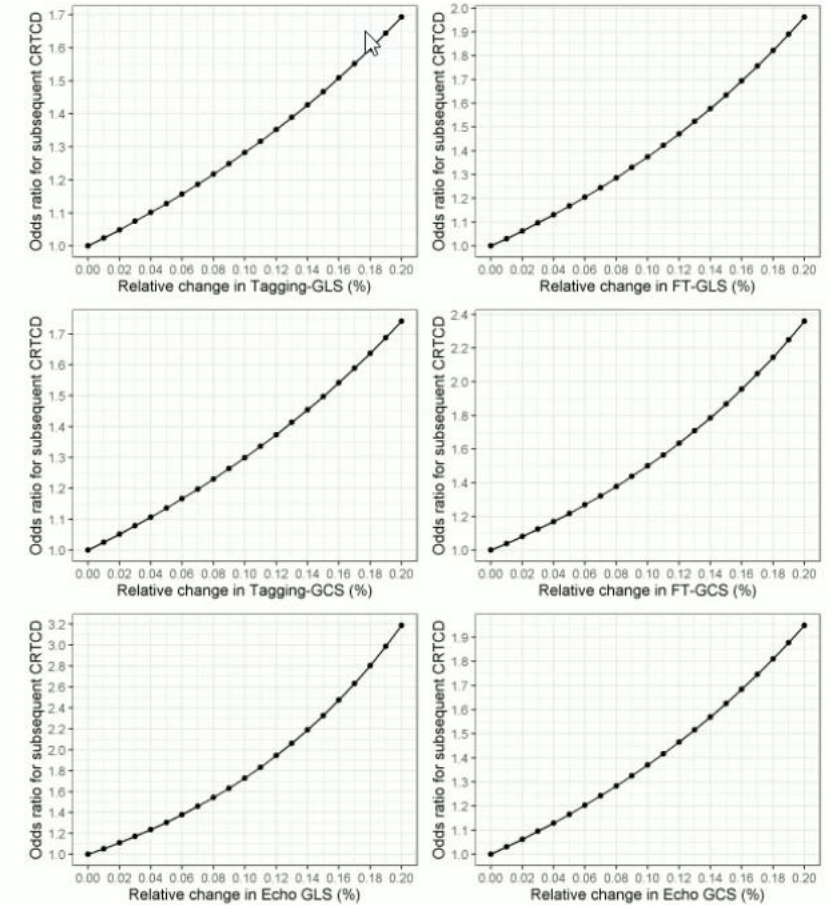


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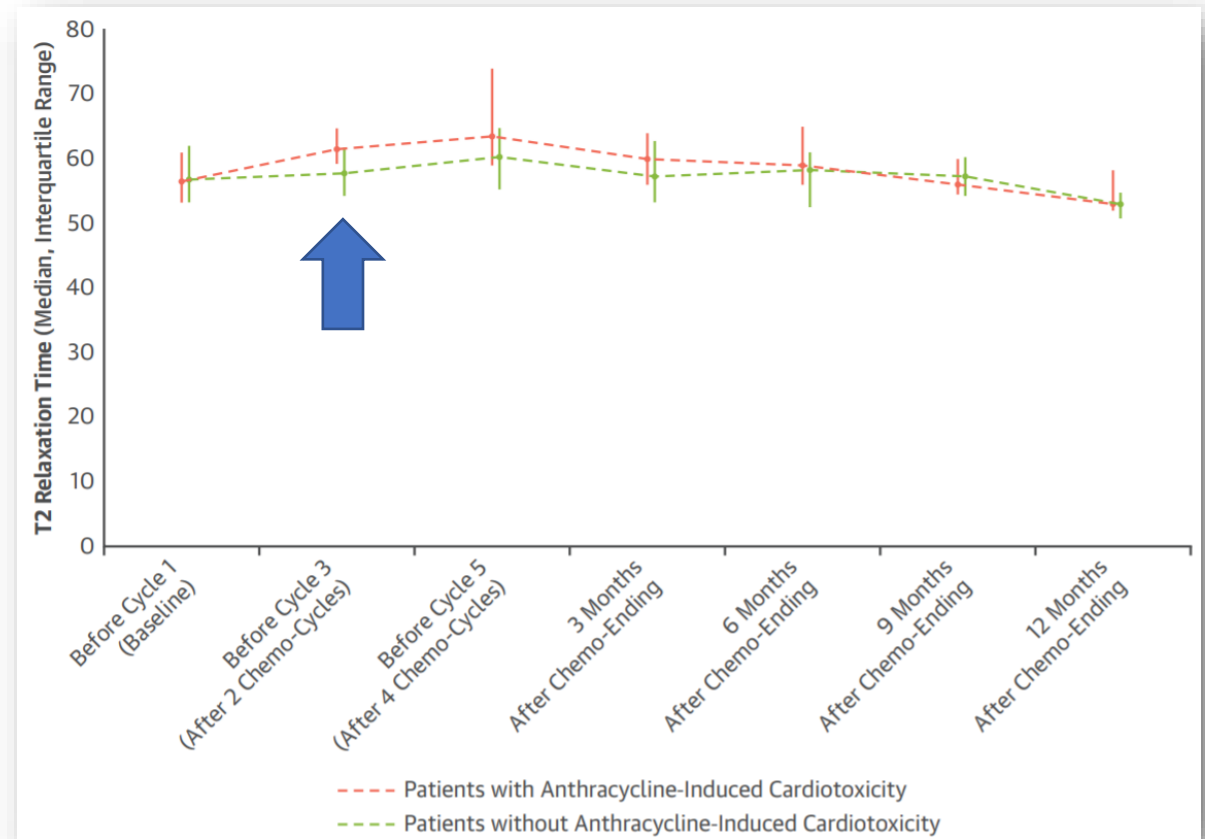
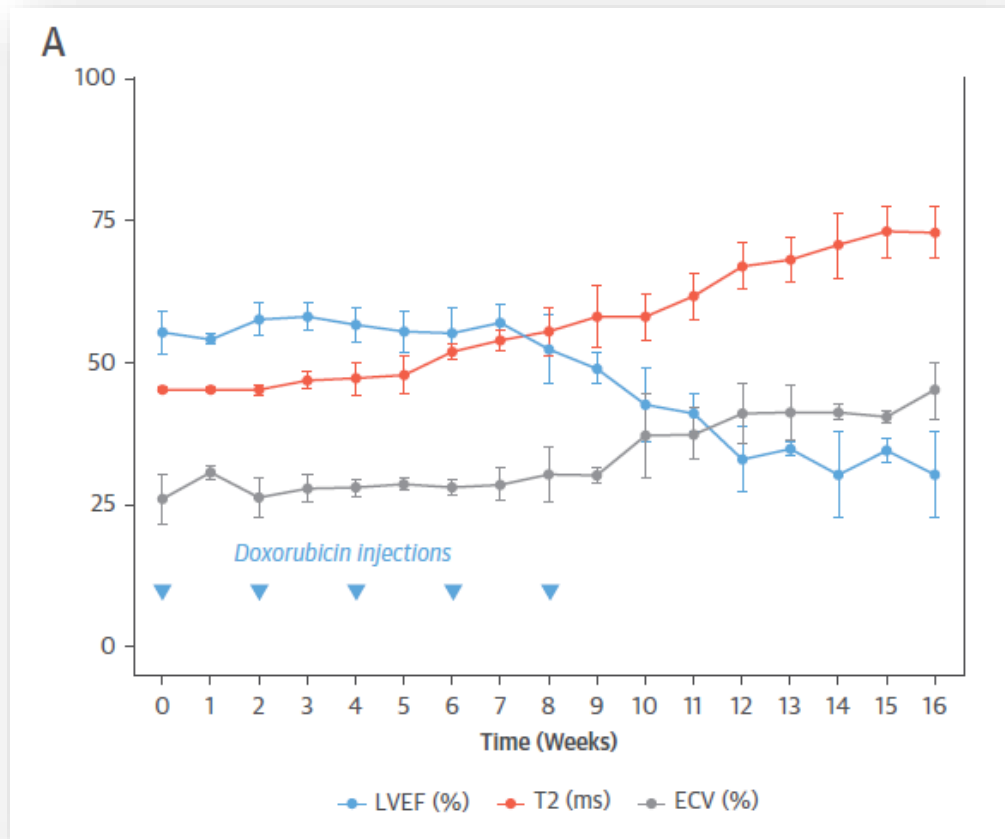


N=125, FEC-DH, BC

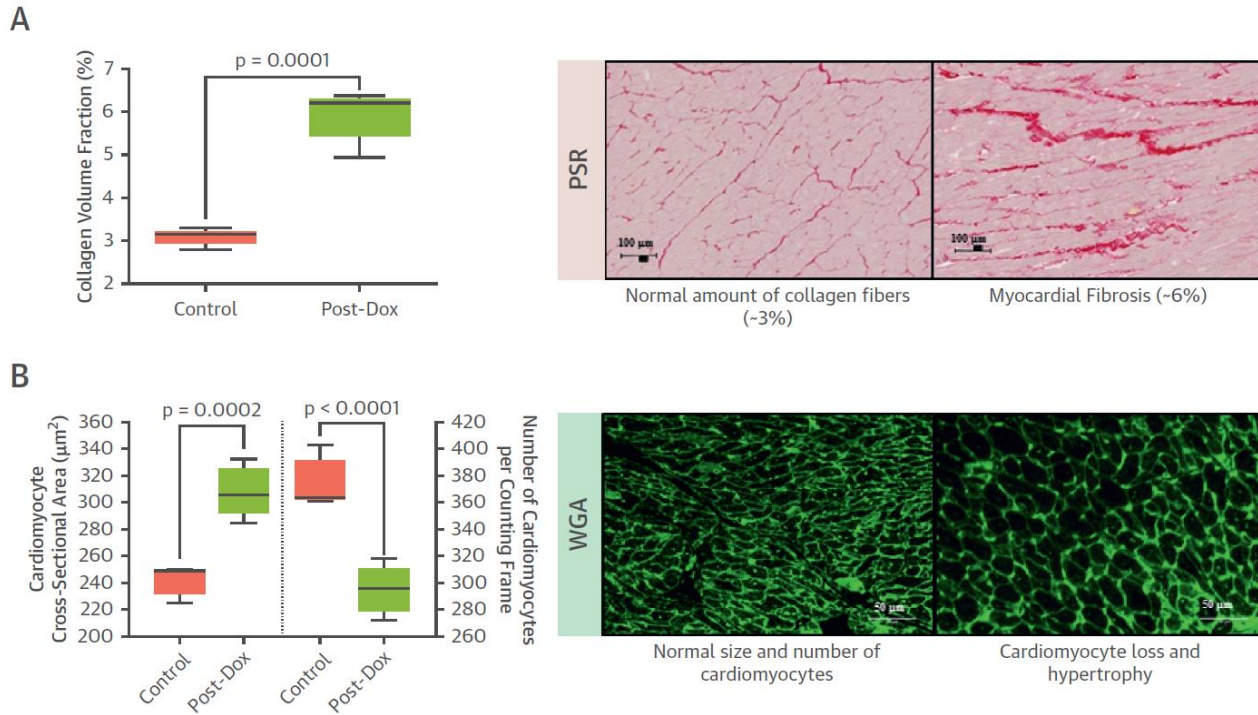
Houbois C, Thavendiranathan P et al, JACCI in press



Biomarcadores e Imagen



Biomarcadores e Imagen



UTILIDAD DE LA RM EN **CARDIO-ONCOLOGÍA**

- Comprensión de los **mecanismos** de cardiotoxicidad
- **Definición** objetiva y muy precisa (vol ventriculares, FVI...)
- **Detección** precoz

Pero...

- **CENTRADO EN ANTRACICLINAS!!**



0.989321

