



4^o CONGRESO AMAREVA

2025

27 y 28 de febrero

Auditorio Caja de Música
del Palacio de Cibeles



AMAREVA

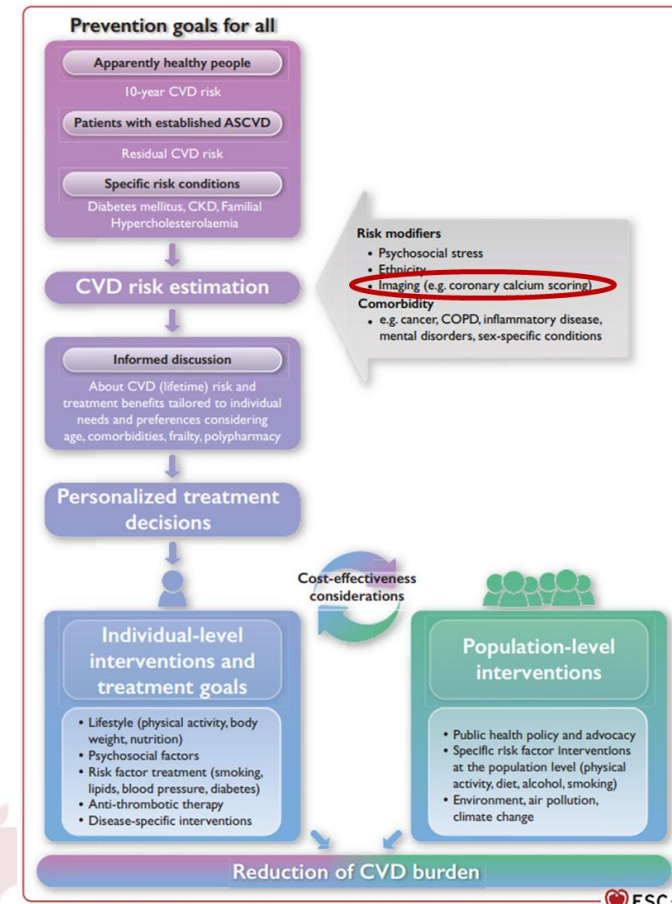
ASOCIACIÓN MADRILEÑA DE RIESGO Y ENFERMEDAD VASCULAR

www.congreso2025.amareva.es

Placa: Me lo creo / no me lo creo. La presencia de placa es determinante de alto riesgo y por lo tanto de objetivo LDL < 55 mg/dl

Varón de 46 años deportista
Ex-fumador (hace > 10 años)
TA 134/87 mmHg
Dislipidemia:
tot-Col 297 mg/dl, LDL-Col 186 mg/dl,
no-HDL 201 mg/dl y TG 55 mg/dl
No otros FRCV

SOCRE2 1,9%
ASCDV 10Y-risk 2,2% **Bajo riesgo**
Lifetime risk 33%



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Coronary Artery Calcium Score: **684**

Percentile by sex, age and ethnicity: **96**

(<http://www.mesa-nhlbi.org/Calcium/input.aspx>)

Placa: ¡Me lo creo! Y adecuaré la intensidad del tratamiento al riesgo de mi paciente, tanto clínico como por imagen

JACC ADVANCES
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VOL. 3, NO. 11, 2024

Coronary Artery Calcium Staging to Guide Preventive Interventions

A Proposal and Call to Action

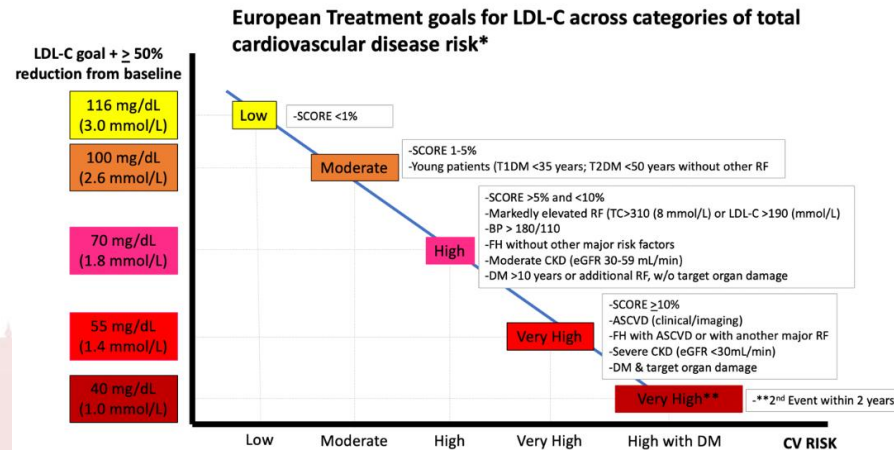


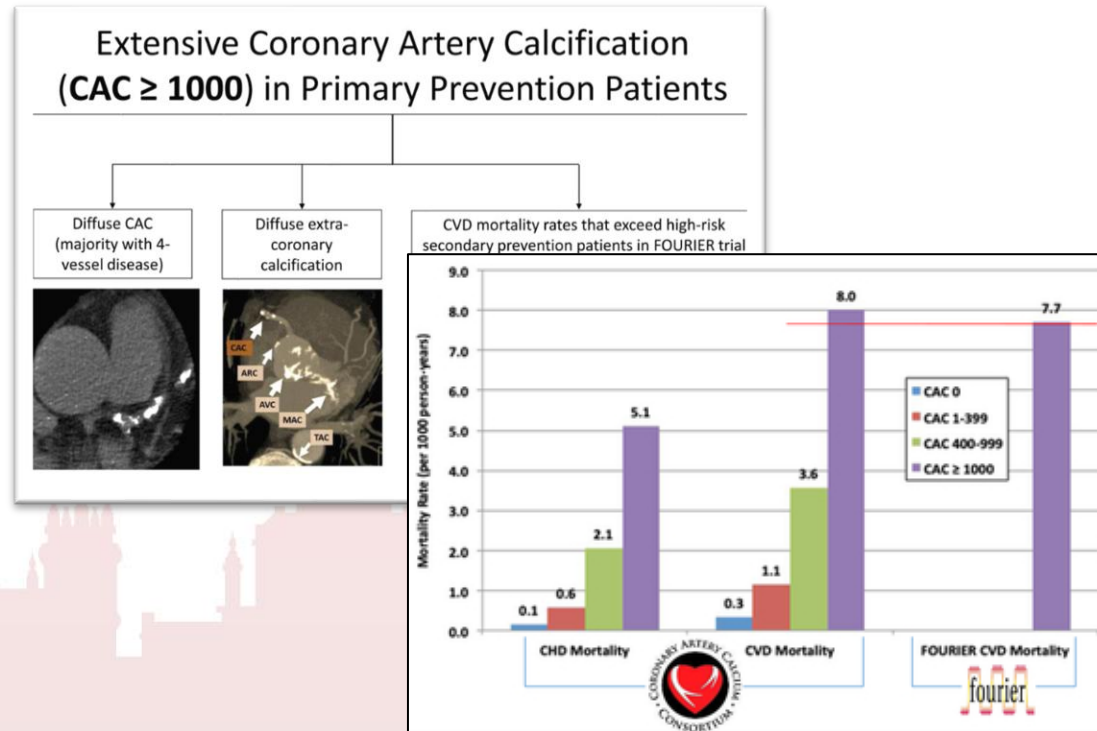
TABLE Proposed Coronary Artery Calcium Staging Guide to Therapy

Stage	CAC Score and Disease Level	Representative Scan Image (White = CAC)	Therapeutic Recommendations Based on ACC/AHA Expert Consensus and Guidelines ^{2,3}
0	<ul style="list-style-type: none"> CAC Score: 0 No calcified plaque Visual score: CAC absent 		<ul style="list-style-type: none"> Promote American Heart Association Life's Essential 8 Optimal Risk Factor Goals⁷ Consider no statin <i>unless</i> diabetes, LDL-C ≥190 mg/dL, smoker, family history of premature ASCVD, 10-y ASCVD risk ≥20%, or high Lp(a) Consider repeat CT for CAC or analysis of nongated chest CT at: <ul style="list-style-type: none"> 3 y for diabetes or high 10-y risk for ASCVD 3-5 y for intermediate 10-y risk for ASCVD 5-7 y for low 10-y risk for ASCVD
1	<ul style="list-style-type: none"> CAC Score: 1-99 and <75th percentile for age and sex Mild atherosclerotic burden 		<ul style="list-style-type: none"> Promote American Heart Association Life's Essential 8 Optimal Risk Factor Goals⁷ Statin (+nonstatin) therapy as needed to achieve LDL-C goal <100 mg/dL Serial monitoring of all risk factors (eg, LDL-C, systolic blood pressure) to achieve critical biometric targets
2	<ul style="list-style-type: none"> CAC Score: 100-299 or ≥75th percentile for age and sex Moderate atherosclerotic burden 		<ul style="list-style-type: none"> All of the above plus: <ul style="list-style-type: none"> Statin (+nonstatin) therapy as needed to achieve LDL-C goal <70 mg/dL Consider low-dose aspirin therapy
3	<ul style="list-style-type: none"> CAC Score: 300-999 Severe atherosclerotic burden Very high risk; risk associated with CAC ≥300 is similar to having had a myocardial infarction 		<ul style="list-style-type: none"> All of the above plus: <ul style="list-style-type: none"> High-intensity statin (+nonstatin) therapy as needed to achieve LDL goal <55 mg/dL³ Low-dose aspirin
4	<ul style="list-style-type: none"> CAC Score: ≥1,000 Extensive atherosclerotic burden Extreme risk; risk associated with CAC ≥1,000 similar to having had multiple ASCVD events 		<ul style="list-style-type: none"> All of the above plus: <ul style="list-style-type: none"> Statin (+nonstatin) therapy as needed to achieve LDL-C goal <55 mg/dL³ Consider emerging therapies⁸

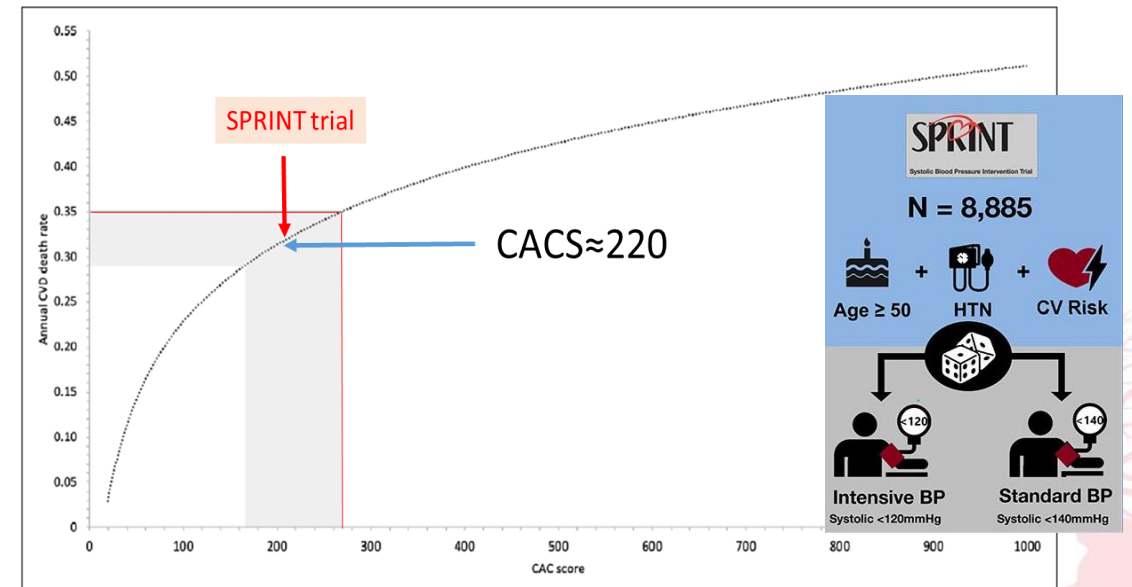
Maron D. JACC Advances 2024;3(11).

Breakthrough: La carga de placa identifica individuos con un riesgo equivalente al de prevención secundaria

- Un CACS de 1000 o más identificaría pacientes de MUY ALTO riesgo equivalente a prevención 2ª



- Un CACS de 220 o más identificaría adultos con hipertensión de MUY ALTO riesgo CV en prevención 1ª



Iftekhar Uddin SM et al. Hypertension 2019 May;73(5):983-989.

Peng A.W. JACC Cardiovasc Imaging 2020 Jan; 13(1 Pt 1): 83-93.

Breakthrough: La prevención 1ª nunca más será únicamente una decisión de estatina si/estatina no

- Un CACS de 100 o más identificaría aquellos pacientes es que se beneficiarían de tratamiento con AAS en prevención 1ª
- Ver la placa con CACS selecciona la población que más se beneficia del tratamiento preventivo con GLP-1

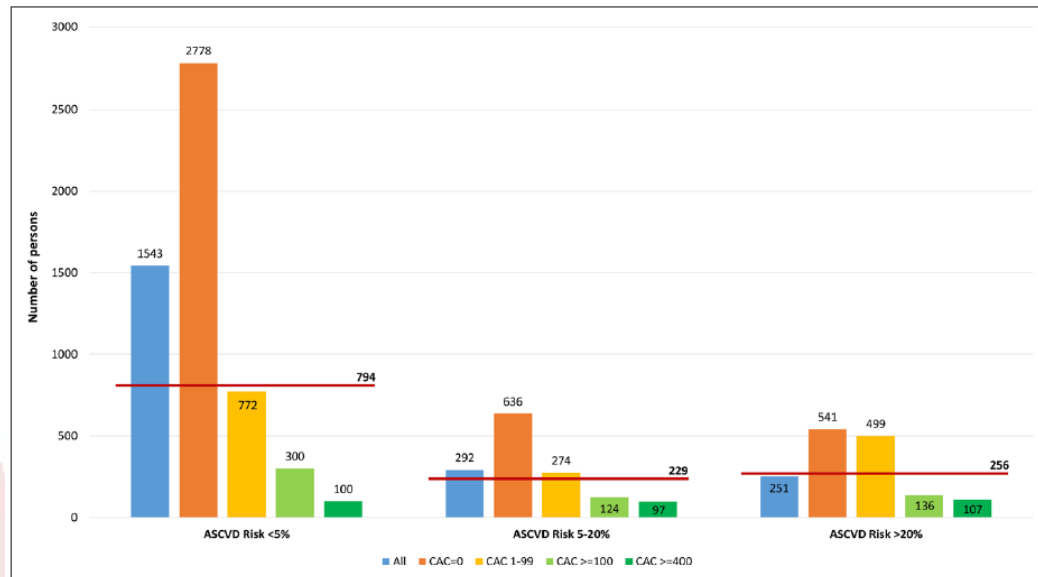
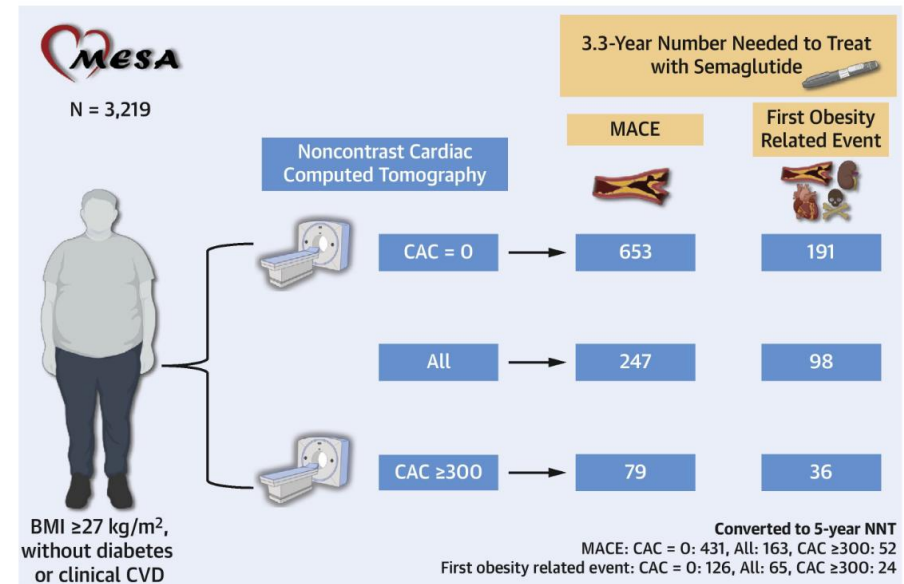


Figure 4. Number needed to treat with aspirin during 5 years to prevent 1 CVD event and number needed to cause a major bleeding event, by estimated ASCVD risk and CAC.



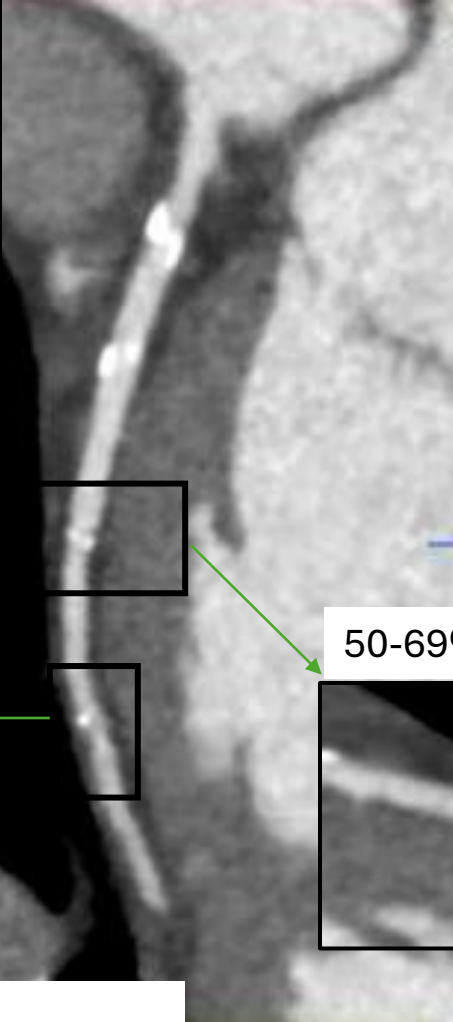
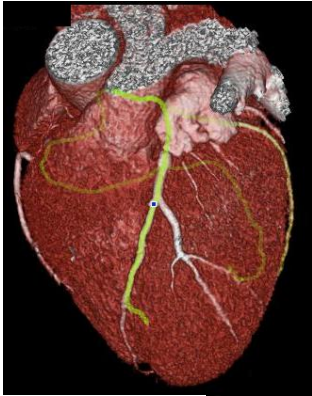
Cainzos-Achirica M, et al. Circulation 2020;141:1541-1553.

CENTRAL ILLUSTRATION: Allocation of Semaglutide According to CAC Burden

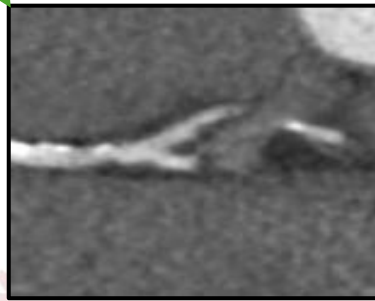
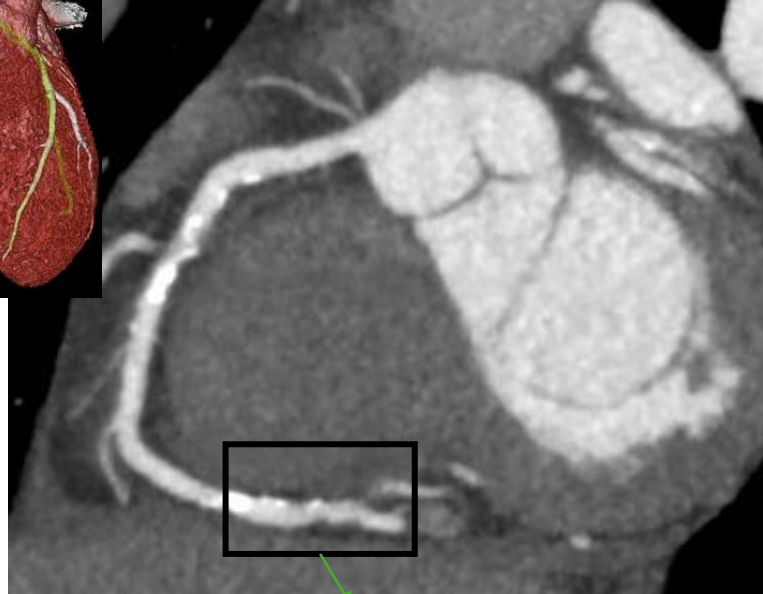
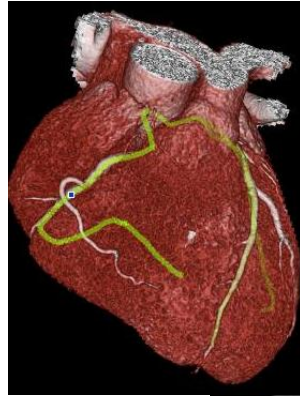
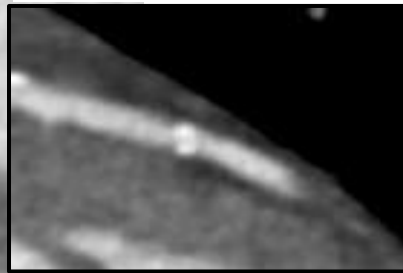


Razavi AC, et al. JACC Cardiovasc Imaging. 2025;10.1016/j.jcmg.2024.10.004

CAD-RADS 3/P3/HRP



50-69% estenosis



≈50% estenosis



50-69% estenosis

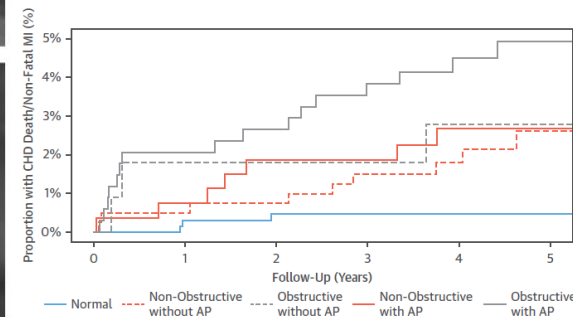
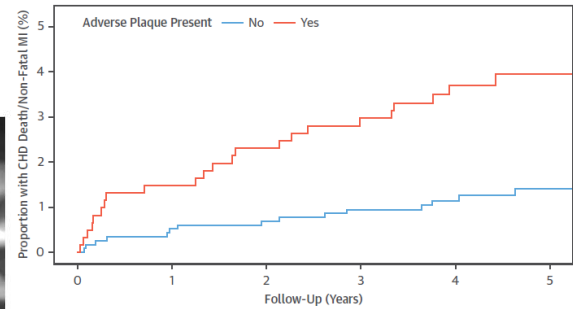
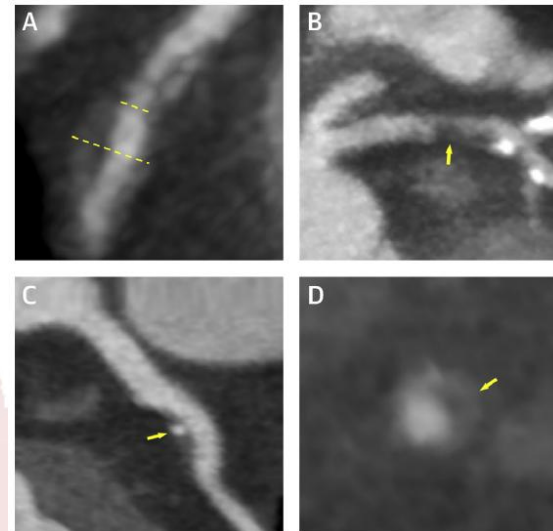
Breakthrough: la presencia de placas ADVERSAS y carga de “placa blanda” son los mejores predictores de riesgo CV

- La presencia de **placas HRP** incrementa **x 4** el riesgo de IAM, aunque no fue independiente del CACS

- >4% **Low-attenuation PB** incrementó **x5** el riesgo de MACE independientemente del % de estenosis, del CACS y de la carga de placa total

JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY
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Coronary Artery Plaque Characteristics Associated With Adverse Outcomes in the SCOT-HEART Study

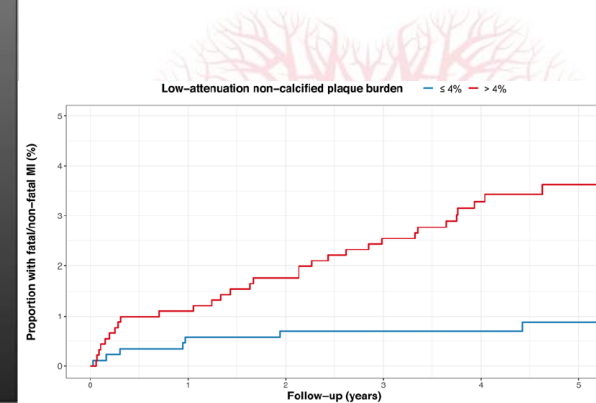
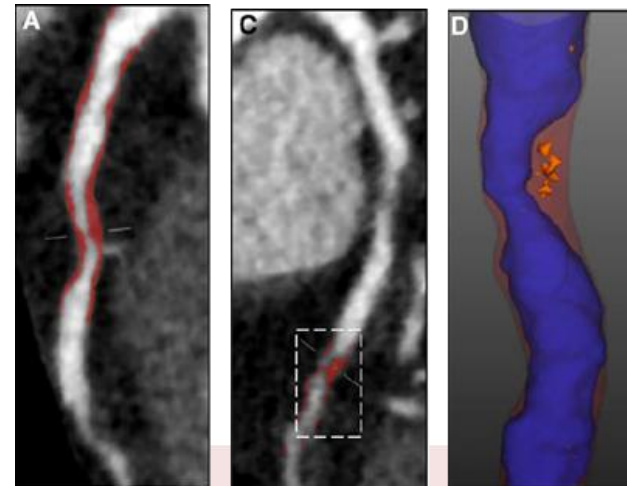


Williams MC et al. J Am Coll Cardiol 2019;73:291–301

Circulation

Low-Attenuation Noncalcified Plaque on Coronary Computed Tomography Angiography Predicts Myocardial Infarction

Results From the Multicenter SCOT-HEART Trial (Scottish Computed Tomography of the HEART)



Williams MC, Dweck MR, Dey D, et al. Circulation 2020;141:1452–1462

Placa: ¿cómo interpretar la placa en ecografía?

Las Guías EUROPEAS de prevención se pronunciaron



European Heart Journal (2021) **42**, 3227–3337
doi:10.1093/eurheartj/ehab484

2021 ESC Guidelines on cardiovascular disease prevention in clinical practice

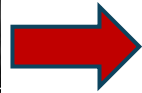
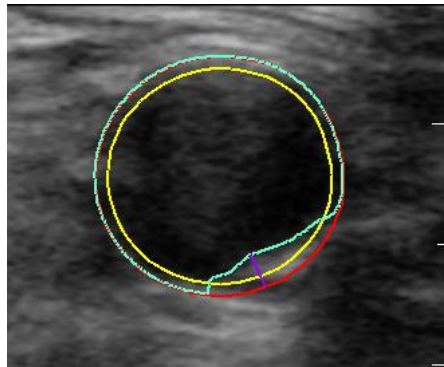
Recommendations for CVD risk modifiers

Recommendations	Class ^a	Level ^b
Stress symptoms and psychosocial stressors modify CVD risk. Assessment of these stressors should be considered. ^{100–102}	IIa	B
<u>CAC scoring may be considered to improve risk classification around treatment decision thresholds. Plaque detection by carotid ultrasound is an alternative when CAC scoring is unavailable or not feasible.</u> ^{103,104}	IIb	B
Multiplication of calculated risk by RR for specific ethnic subgroups should be considered. ¹⁰⁵	IIa	B
The routine collection of other potential modifiers, such as genetic risk scores, circulating or urinary biomarkers, or vascular tests or imaging methods (other than CAC scoring or carotid ultrasound for plaque determination), is not recommended.	III	B

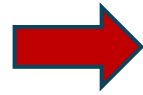
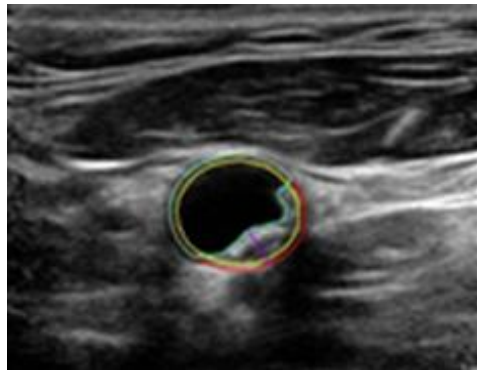
© ESC 2021

Placa: el concepto de “Plaque Detection” incluye un espectro muy amplio de la enfermedad

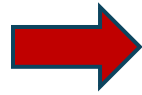
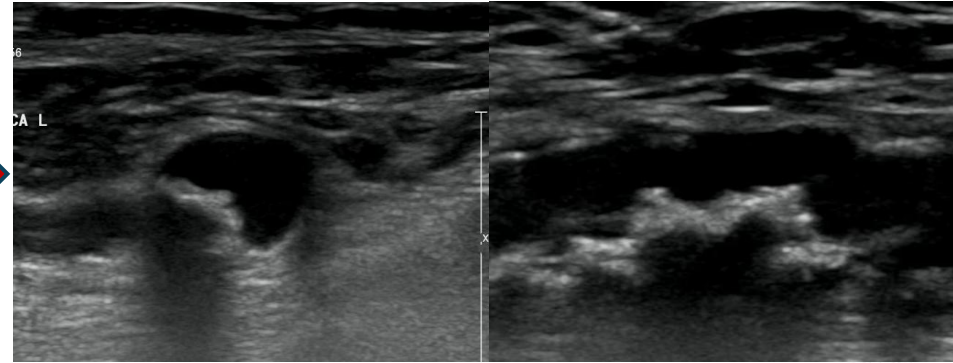
Enfermedad Precoz



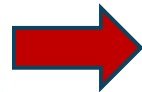
Enf. precoz-intermedia



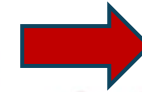
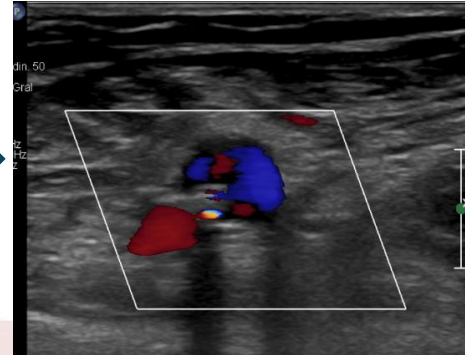
Enf. intermedia-avanzada



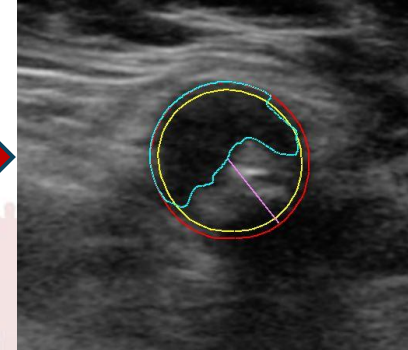
Enf. precoz con características HRP



Enf. avanzada con HRP



Estenosis Significativa



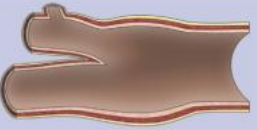
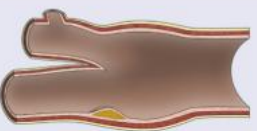
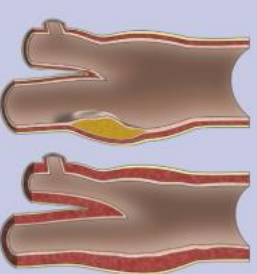
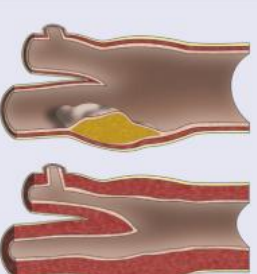
GUIDELINES AND STANDARDS

Recommendations for the Assessment of Carotid Arterial Plaque by Ultrasound for the Characterization of Atherosclerosis and Evaluation of Cardiovascular Risk: From the American Society of Echocardiography

Amer M. Johri, MD, FASE, Vijay Nambi, MD, FASE, Tasneem Z. Naqvi, MD, FASE, Steven B. Feinstein, MD, Esther S. H. Kim, MD, MPH, FASE, Margaret M. Park, ACS, RDCS, RVT, FASE, Harald Becker, MD, PhD, and Henrik Sillesen, MD, DMSc, Kingston, Ontario, Canada; Houston, Texas; Phoenix, Arizona; Chicago, Illinois; Nashville, Tennessee; Cleveland, Ohio; Edmonton, Alberta, Canada; and Copenhagen, Denmark

Atherosclerotic plaque detection by carotid ultrasound provides cardiovascular disease risk stratification. The advantages and disadvantages of two-dimensional (2D) and three-dimensional (3D) ultrasound methods for carotid arterial plaque quantification are reviewed. Advanced and emerging methods of carotid arterial plaque activity and composition analysis by ultrasound are considered. Recommendations for the standardization of focused 2D and 3D carotid arterial plaque ultrasound image acquisition and measurement for the purpose of cardiovascular disease stratification are formulated. Potential clinical application towards cardiovascular risk stratification of recommended focused carotid arterial plaque quantification approaches are summarized. (J Am Soc Echocardiogr 2020;33:917-33.)

Johri AM et al J Am Soc Echocardiogr. 2020 ;33:917-33

Grade	Plaque Type	Plaque Thickness
0		No plaque IMT < 1.5 mm
I		Protuberant (Focal thickening of vessel wall) < 1.5 mm
II		Protuberant or Diffuse (Vessel wall thickened throughout; CIMT ≥ 1.5 mm) 1.5 – 2.4 mm
III		Protuberant or Diffuse (CIMT ≥ 2.5 mm) ≥ 2.5 mm

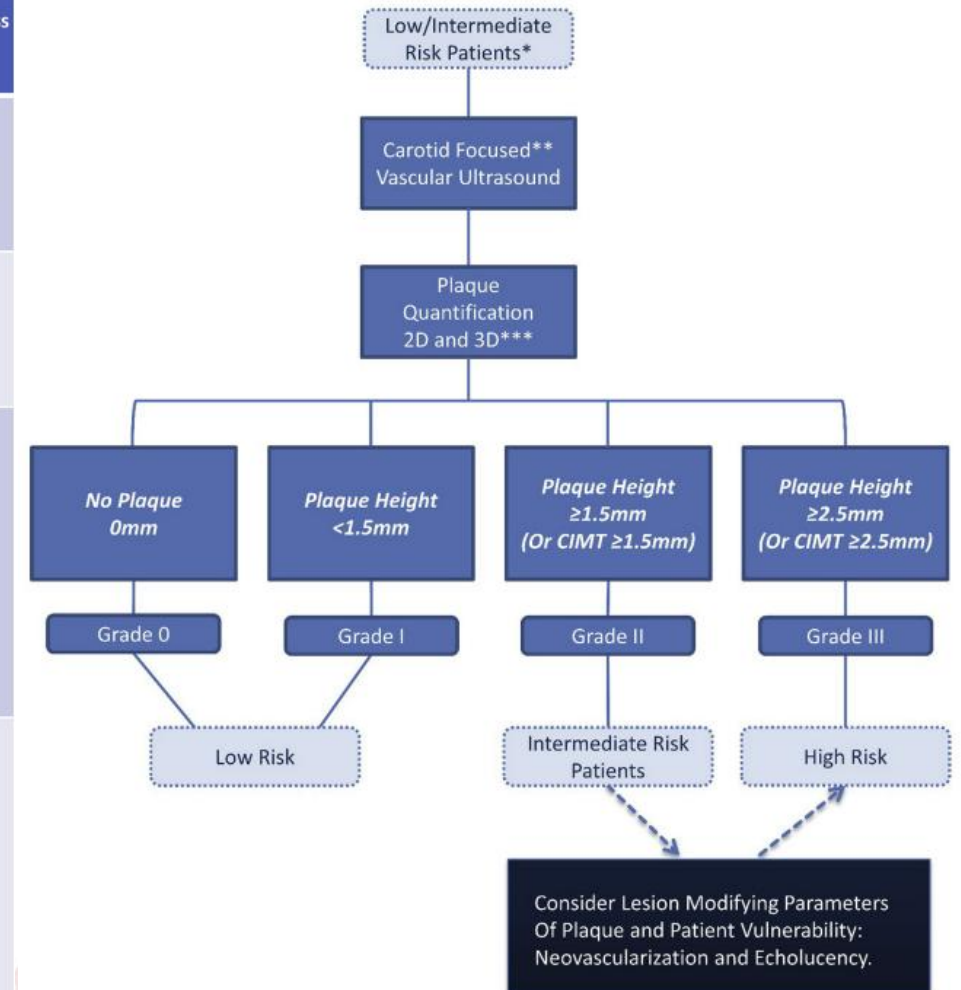


Figure 7 Cardiovascular risk stratification pathway using plaque grading by 2D/3D ultrasound. *Risk Score (Asymptomatic At-Risk Population) adapted from Greenland *et al.* (2010)⁹⁰: *Low Risk*: <6% Framingham Risk Score (FRS), *Intermediate Risk*: Grey Area (6-10% to ≤20% FRS), *High Risk*: ≥20% FRS. **European Guidelines on CVD Prevention in Clinical Practice (Class IIb, Level B); adapted from Piepoli *et al.* (2016).⁹¹ ***3D quantification is recommended to determine the maximal plaque height value from either the left or right carotid arterial bulb. 3D volume should also be measured however, a threshold volume has not yet been determined in large outcome studies. The value of 0.08 ml was found to be associated with significant CAD in a selected population. This algorithm requires updating following further 3D plaque volume investigations.



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No otros FRCV

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ASCDV 10Y-risk 2,2% **Bajo riesgo**

Lifetime risk 33%

¿Cómo trataría a este paciente?

1. Terapia de estilos de vida
2. Estilos de vida + estatinas de moderada intensidad (LDL < 100)
3. EV + estatinas de alta intensidad (LDL < 70)
4. EV, estatinas de alta intensidad + otros hipolipemiantes para conseguir un LDL < 70 mg/dl y consideraría terapia antihipertensiva, incluso aspirina
5. Opción 4 con un LDL < 55 mg/dl (objetivos de prevención 2ª)

**MUCHAS GRACIAS POR SU
ATENCIÓN**

blmelgar@hotmail.com

