

Paciente con DM 2 asintomática

III Reunión de Diabetes y Obesidad



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Las Palmas, 29.1.2009

Antecedentes personales

Mujer de 52 años

- DM tipo 2 desde hace 8 años en tratamiento con ADOs
- HTA
- Dislipemia
- Obesidad en tratamiento dietético
- Niega hábitos tóxicos
- IQ: herniorrafia inguinal derecha.Colecistectomizada.
- AF: Hermano diagnosticado de DM-II y otra hermana con dislipemia.
- Tto actual : metformina(2 comp/dia) y glimepirida (4 mg/dia) ,simvastatina 10 mg/dia, indapamida (1.5 mg/dia)

Enfermedad actual

- Remitida a consulta de endocrinología por mal control metabólico:
 - Cifras medias glucemia en ayunas de 270 mg/dl
 - HgA1c en un rango del **9,8-10,7 %** en los dos últimos años.
- Refiere episodios de hipoglucemia ocasionales que no han requerido ingreso y son subsanados por la propia paciente mediante la ingestión de azúcar.
- No realiza controles de fondo de ojo
- La analítica aportada por médico de cabecera : microalbuminuria de 220 mg/24h.
- No sigue la dieta de forma correcta y lleva una vida sedentaria.
- No refiere ningún episodio cardiovascular. Asintomática

Exploración física

- Peso: 72 kg, Talla: 152 cm
- Perímetro de cintura : 105 cm
- IMC: 32 Kg/m²
- TA: 170 / 90 mmHg
- AC: ruidos ritmos. No ausculto soplos ni roces
- AP: MVC. Sin ruidos sobreañadidos
- Abd: Globuloso.ByD. No doloroso a la palpación. No se palpan masas ni visceromegalias
- Neurológico: Sin signos focalidad. Tono, fuerza y sensibilidad conservadas.ROT Ø

Analítica

Hemograma: normal

Coagulación : normal

Bioquímica:

- Creatinina: 0.8 mg/dl
- Aclaración de creatinina > 60 ml/min
- Cifras normales de ácido úrico, albumina, función hepática
- Perfil lipídico: colesterol total 218 mg/dl, HDL 42mg/dl,
LDL:156 mg/dl , TG:98 mg/dl.
- Nivel HbA1c: 10.4 %

Orina: Índice albumina/creatinina se constata cifra de microalbuminuria 260 mg/g.

ECG: Ritmo sinusal a 75 lpm. Sin trastornos en la repolarización ni signos de hipertrofia ventricular izquierda.

El examen de **fondo de ojo** demuestra retinopatía diabética no proliferativa leve.

¿Qué pruebas solicitaríamos?

ECG

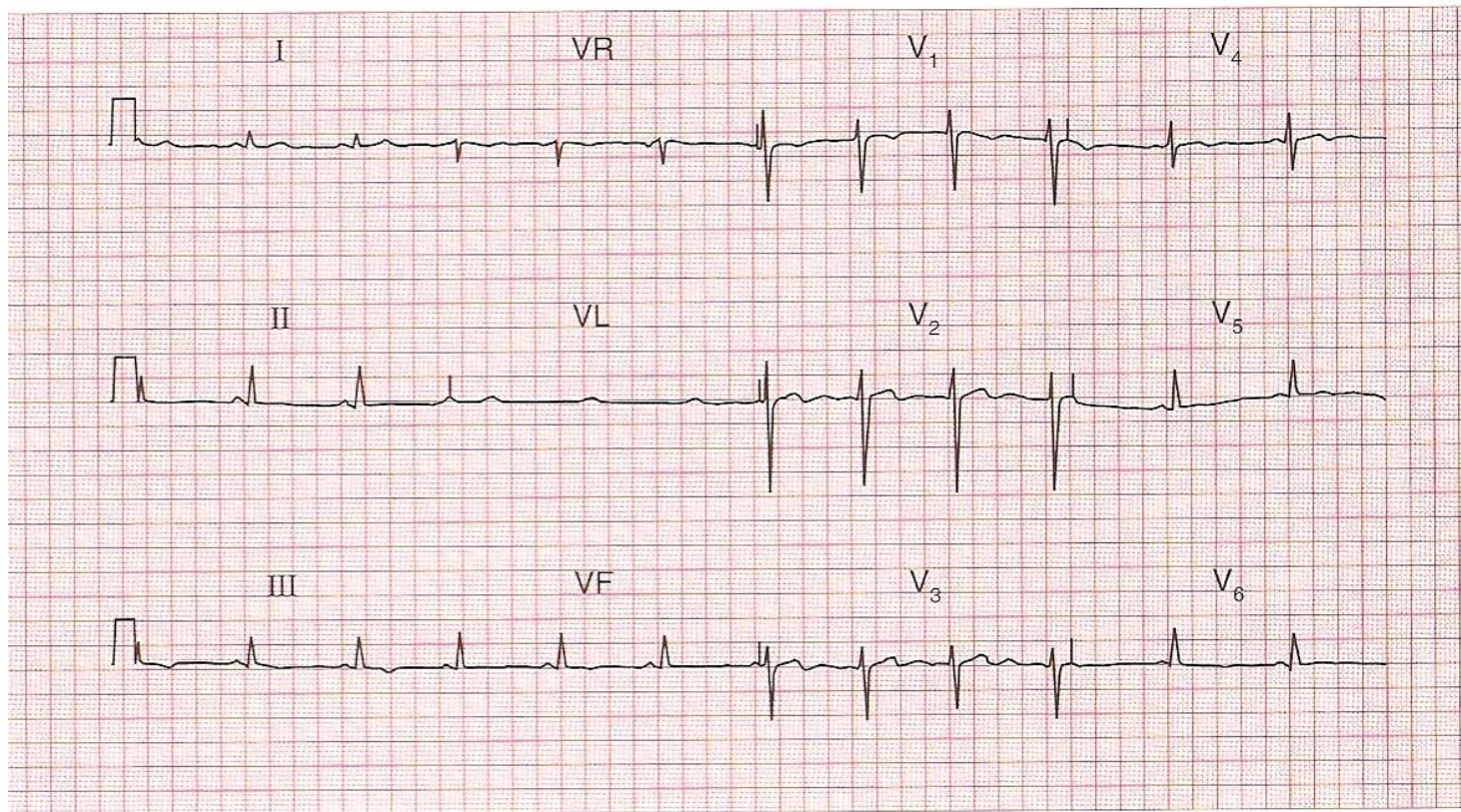
Ecocardiografía

Grosor íntima- media carotídea

Índice tobillo-brazo

Prueba de esfuerzo





ENFERMEDAD CORONARIA Y DIABETES MELLITUS

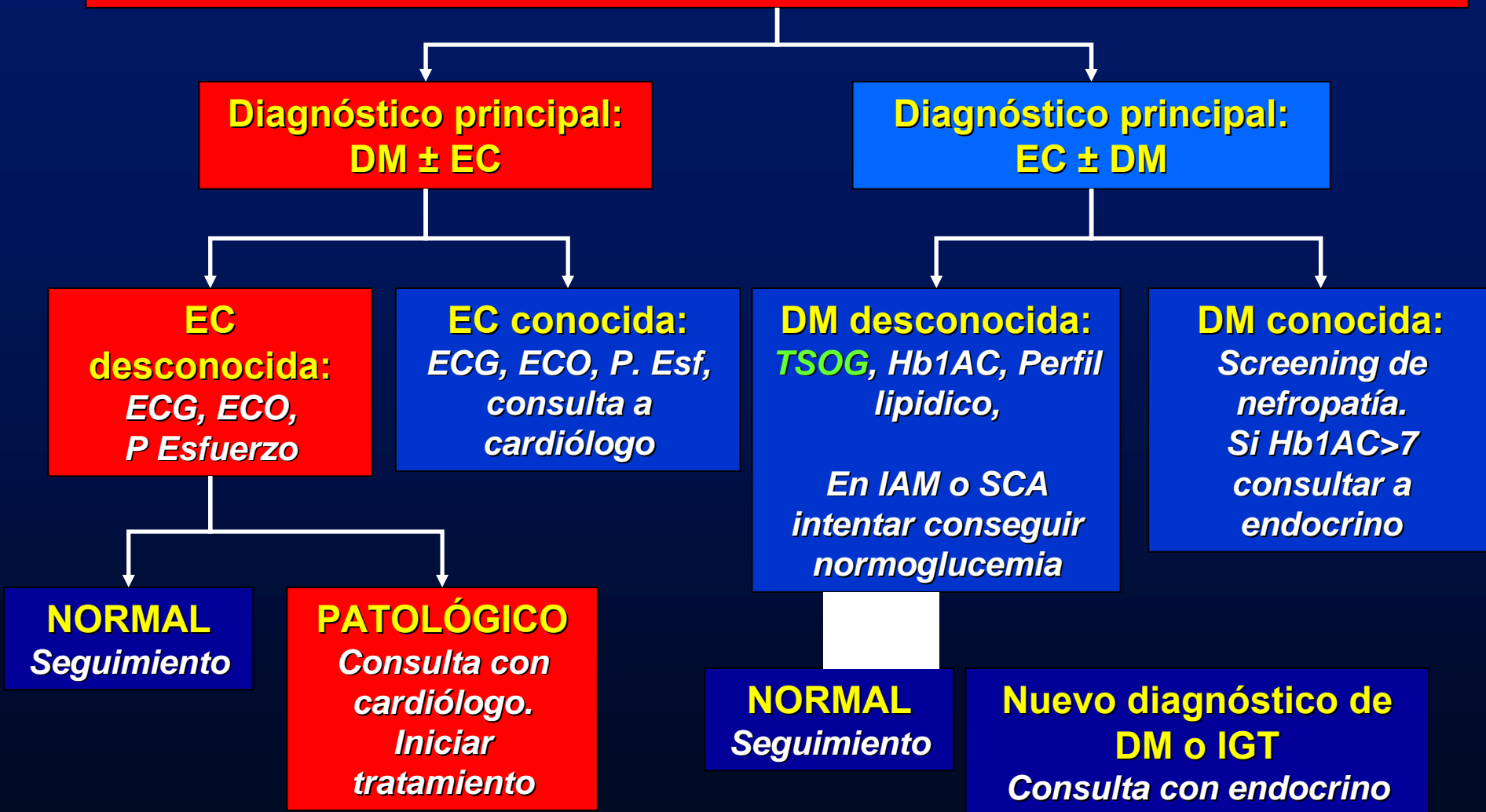
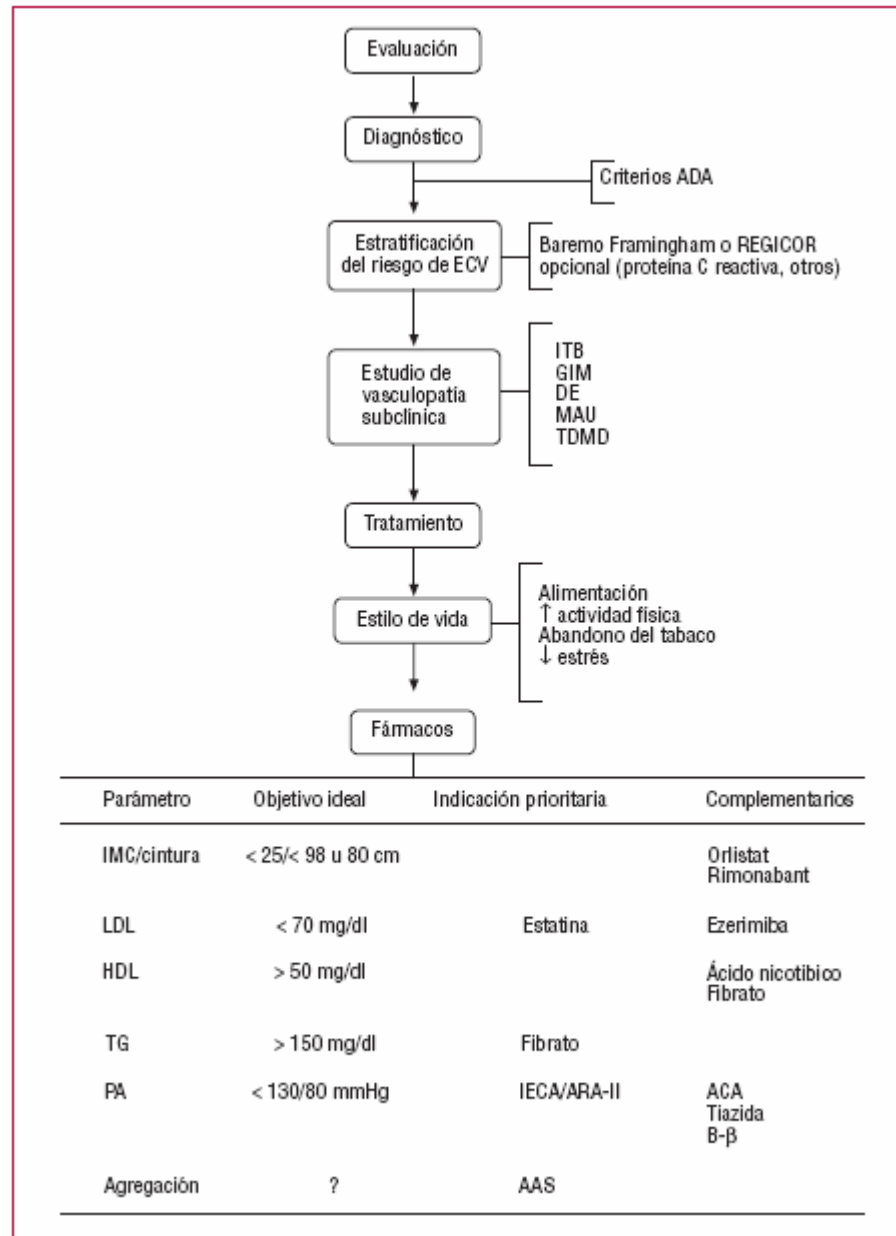


Fig. 9. Esquema general del tratamiento preventivo del paciente con diabetes²⁶, aplicable también al síndrome metabólico. AAS: ácido acetilsalicílico; ACA: antagonista del calcio; ARA-II: antagonista del receptor de la angiotensina II; B β : bloqueadores beta; DE: disfunción eréctil; ECV: enfermedad cardiovascular; GIM: grosor íntima-media carotídea; HDL: lipoproteínas de alta densidad; IECA: inhibidores de la convertasa angiotensínica; IMC: índice de masa corporal; ITB: índice tobillo/brazo; LDL: lipoproteínas de baja densidad; MAU: microalbuminuria; PA: presión arterial; TDMD: tomografía digital multidetector; TG: triglicéridos.



Rev Esp Cardiol. 2008;61(7):752-64. “Obesidad, síndrome metabólico y diabetes: implicaciones cardiovasculares y actuación terapéutica”

Standards of Medical Care in Diabetes—2009

AMERICAN DIABETES ASSOCIATION

DIABETES CARE, VOLUME 32, SUPPLEMENT 1, JANUARY 2009

Candidates for cardiac testing include those with 1) typical or atypical cardiac symptoms and 2) an abnormal resting electrocardiogram (ECG).

The screening of asymptomatic patients remains controversial, especially as intensive medical therapy indicated in diabetic patients at high risk for CVD has an increasing evidence base for providing equal outcomes to invasive revascularization, including in diabetic patients

of diabetes care, treatment goals, and tools to evaluate the quality of care. While individual preferences, comorbidities, and other patient factors may require modification of goals, targets

sive insulin secretory defect on the background of insulin resistance)

- other specific types of diabetes due to other causes, e.g., genetic defects in β -cell function, genetic defects in insu-

diagnostic test. Though FPG is less sensitive than the OGTT, the vast majority of people who do not meet diagnostic criteria for diabetes by FPG but would by OGTT will have an A1C value well under 7.0% (6).

Though the OGTT is not recom-

A recent randomized observational trial presented at the ADA's Scientific Sessions in June 2008 demonstrated no clinical benefit to routine screening of asymptomatic patients with type 2 diabetes and normal ECGs. Despite abnormal myocardial perfusion imaging in more than one in five patients, cardiac outcomes were essentially equal (and very low) in screened versus unscreened patients

Diabetes Association (ADA) and modeled after existing methods, was utilized to clarify and codify the evidence that forms the basis for the recommendations. The level of evidence that supports each recommendation is listed after each recommendation using the letters A, B, C, or E.

may present with ketoacidosis. Similarly, patients with type 1 may have a late onset and slow (but relentless) progression of disease despite having features of autoimmune disease. Such difficulties in diagnosis may occur in children, adolescents, and adults. The true diagnosis may become more obvious over time.

cance of A1C, an Expert Committee on the Diagnosis of Diabetes was convened in 2008. This joint committee of ADA, the European Association for the Study of Diabetes, and the International Diabetes Federation will likely recommend that the A1C become the preferred diagnostic test for diabetes. Diagnostic cut-points are being discussed at the time of publication of this statement. Updated recommendations will be published in *Diabetes Care* and will be available at diabetes.org.

C. Diagnosis of pre-diabetes

Hyperglycemia not sufficient to meet the diagnostic criteria for diabetes is catego-

The recommendations in this article are based on the evidence reviewed in the following publication: Standards of Care for Diabetes (Technical Review). *Diabetes Care* 17:1514–1522, 1994. Originally approved 1988. Most recent review/revision October 2008. DOI: 10.2337/dc09-5013

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Limitaciones Ergometría

- Ancianos
- Alteraciones ECG basal: BCRI, WPW, marcapasos,...
- Mujeres
- Necesidad realizar esfuerzo para alcanzar FCME
- Valoraciones abiertas a interpretaciones: HVI, FA, digital, post revascularización...
- Rentabilidad diagnóstica dependiente de la probabilidad pretest (teorema Bayes)

Probabilidad pre-test enfermedad coronaria

(a) Pretest likelihood of CAD in symptomatic patients according to age and sex

Age (years)	Typical angina		Atypical angina		Non-anginal chest pain	
	Male	Female	Male	Female	Male	Female
30-39	69.7 ± 3.2	25.8 ± 6.6	21.8 ± 2.4	4.2 ± 1.3	5.2 ± 0.8	0.8 ± 0.3
40-49	87.3 ± 1.0	55.2 ± 6.5	46.1 ± 1.8	13.3 ± 2.9	14.1 ± 1.3	2.8 ± 0.7
50-59	92.0 ± 0.6	79.4 ± 2.4	58.9 ± 1.5	32.4 ± 3.0	21.5 ± 1.7	8.4 ± 1.2
60-69	94.3 ± 0.4	90.1 ± 1.0	67.1 ± 1.3	54.4 ± 2.4	28.1 ± 1.9	18.6 ± 1.9

Teorema Bayes

(b) CAD post-test likelihood (%) based on age, sex, symptom classification and exercise-
ST-segment depression

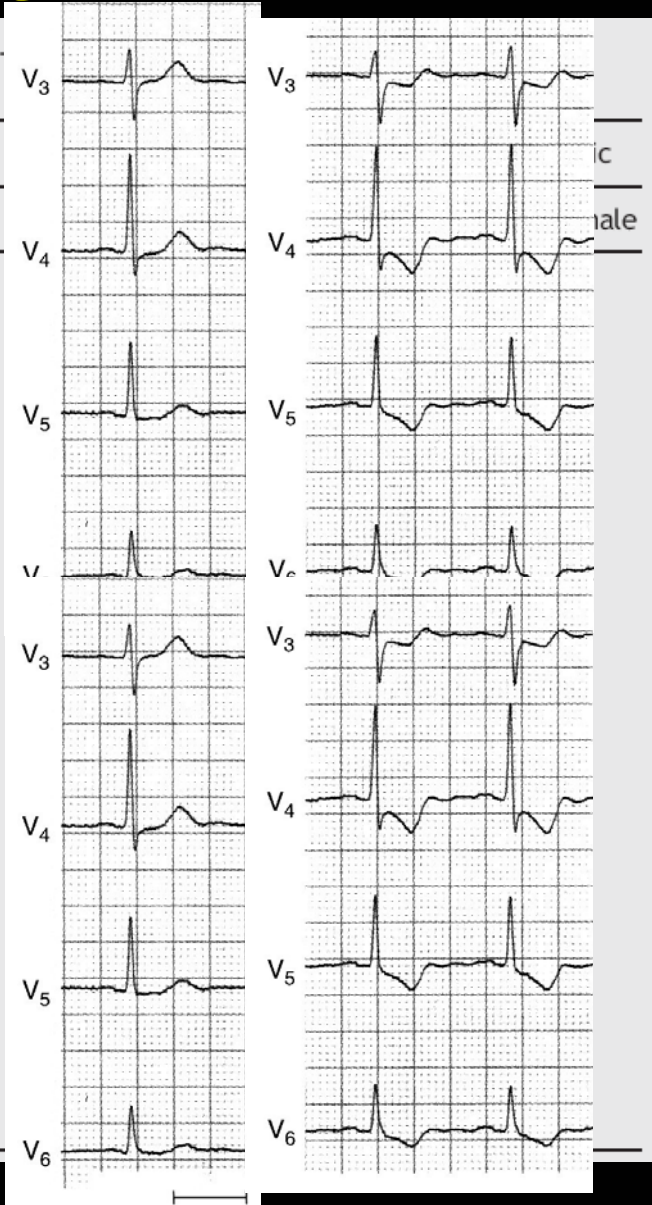
Age (y)	Exercise- ST-segment depression	Typical angina		Atypical angina	
		Male	Female	Male	Female
30-39	0.00-0.09	98	79	76	1
	0.00-0.14	99	93	92	4
	0.00-0.19	61	22	16	9
	0.00-0.24	86	53	44	15
	>0.25	94	72	64	33
	>0.25	97	84	78	63
40-49	0.00-0.04	99	93	91	3
	0.00-0.09	97	84	78	12
	0.00-0.14	99	93	91	39
50-59	0.00-0.04	99	93	91	63
	0.00-0.09	99	93	91	63
	0.00-0.14	99	93	91	63
60-69	0.00-0.04	99	93	91	63
	0.00-0.09	99	93	91	63
	0.00-0.14	99	93	91	63
70-79	0.00-0.04	99	93	91	63
	0.00-0.09	99	93	91	63
	0.00-0.14	99	93	91	63
80-89	0.00-0.04	99	93	91	63
	0.00-0.09	99	93	91	63
	0.00-0.14	99	93	91	63
90-99	0.00-0.04	99	93	91	63
	0.00-0.09	99	93	91	63
	0.00-0.14	99	93	91	63



48 a



48 a



Indicaciones Ergometría

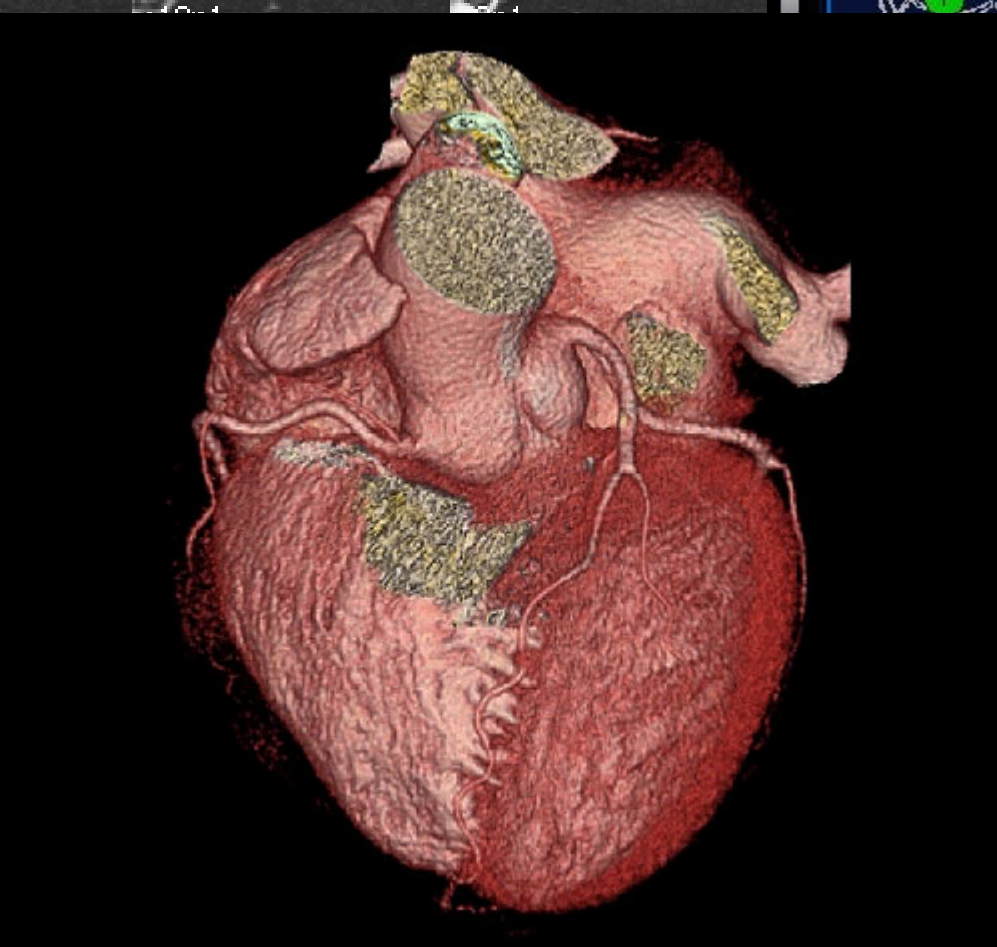
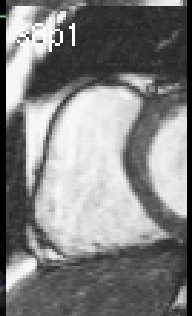
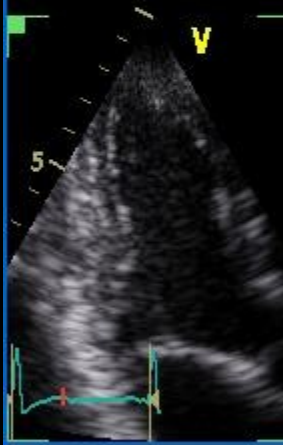
Síntomas de angina y probabilidad pretest intermedia de enfermedad coronaria para diagnóstico	I
Diagnóstico con probabilidad pretest baja	IIb
Diagnóstico con \downarrow ST basal ≥ 1 mm	IIb
Control en pacientes estables	IIb



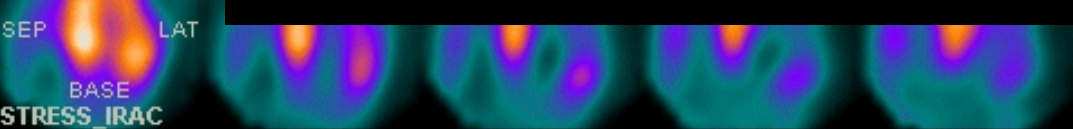
06/16/2004 08:55:44 PM
Baseline : Tri Ap 4 2
T1: 2:40



06/16/2004 09:01:44 PM
Peak : Tri Ap 4 2
T1: 8:40



CAPS



<----- Inferior Horizontal Axis Anterior ----->

Consideraciones especiales en diabéticos

- Mortalidad x3 en ♂ y x 5 en ♀
- > frecuencia isquemia silente
- Asocia disfunción ventricular suclínica
- Diagnóstico enfermedad coronaria similar al de no diabéticos
- Indicaciones de tratamiento farmacológico y de revascularización similar a no diabéticos (Objetivos específicos)

ESTUDIO COURAGE

¿REVASCULARIZACIÓN O TRATAMIENTO MÉDICO?

POBLACIÓN:

- Estenosis de $\geq 70\%$ proximal en ≥ 1 CE + evidencia objetiva de isquemia
- Estenosis $\geq 80\%$ + angina típica sin isquemia objetivada

PCI + tratamiento médico óptimo

Tratamiento médico óptimo

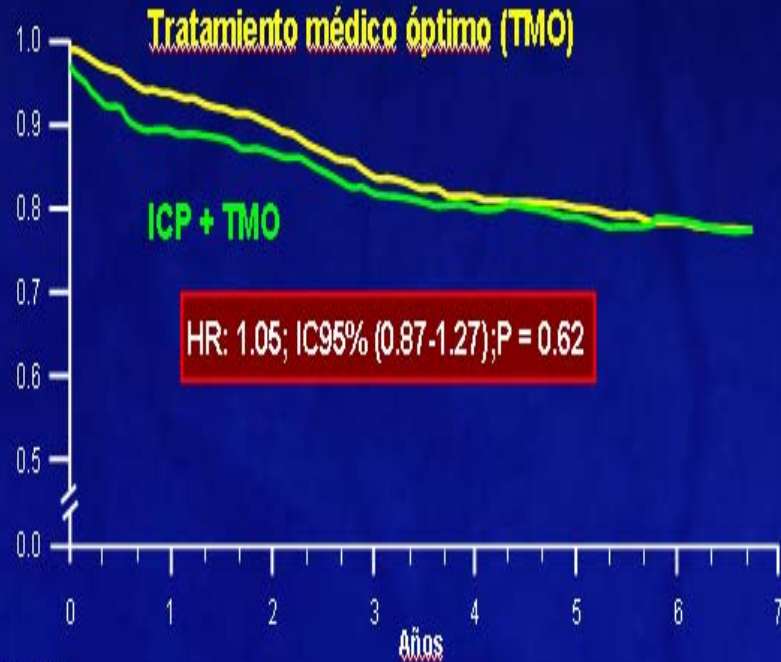
End-point primario → Muerte de cualquier causa + IM no fatal

End-point secundario → Muerte, IM, stroke y hospitalización por angina inestable con marcadores negativos

EXCLUSIÓN → Angina clase IV, test de inducción de isquemia de alto riesgo, IC refractaria o shock cardiogénico, FEVI $< 30\%$, revascularización en los últimos 6 meses.

Estudio COURAGE. Resultados

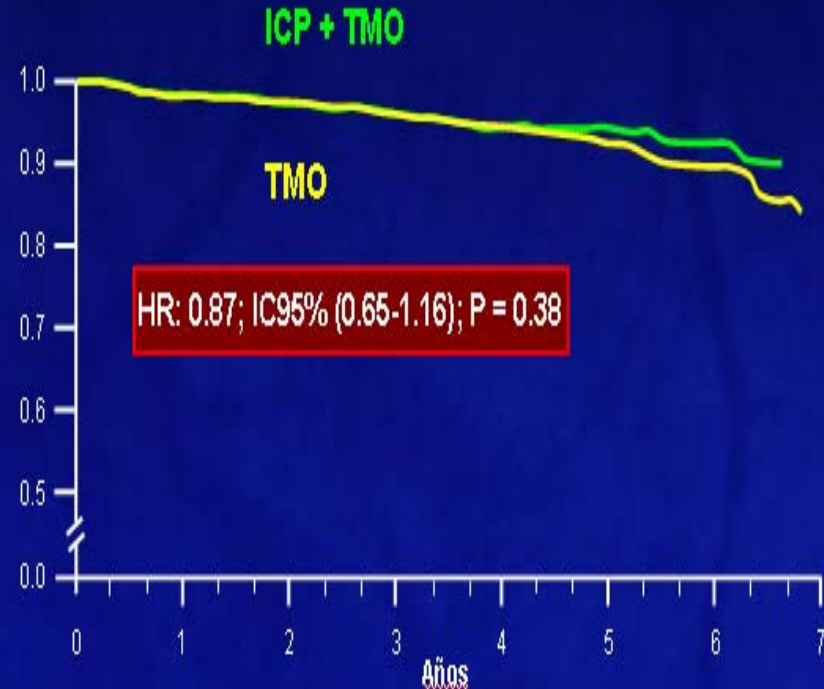
Supervivencia Libre de Muerte por cualquier causa e Infarto de Miocardio



Número en riesgo

Tto. Médico	1138	1017	959	834	638	408	192	30
ICP	1149	1013	952	833	637	417	200	35

Supervivencia Global



Número en riesgo

Tto. Médico	1138	1073	1029	917	717	468	302	38
ICP	1149	1094	1051	929	733	488	312	44

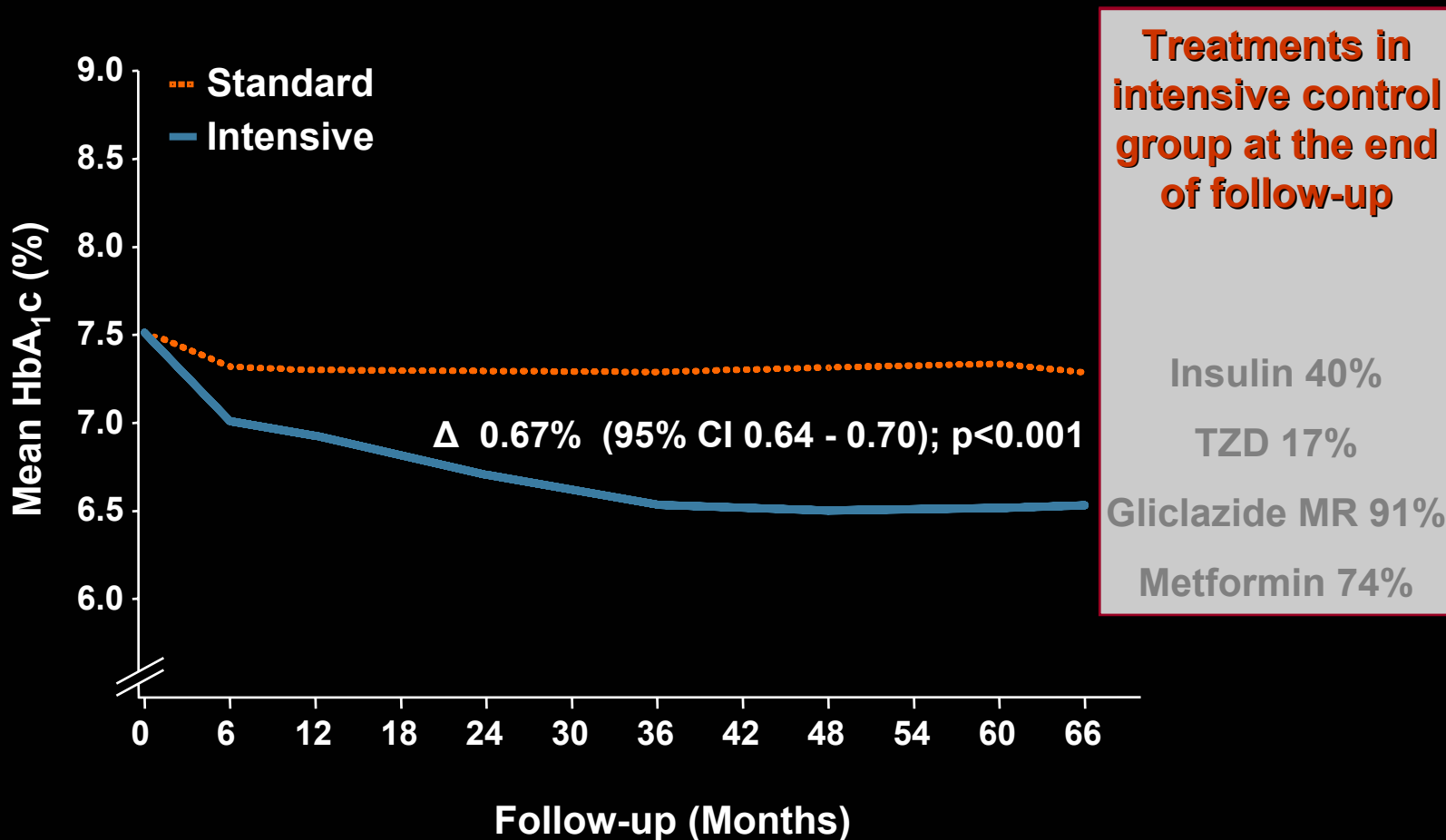
Indicaciones ICP en angina estable

Indication	For prognosis ^a		For symptoms ^b		Studies
	Class of recommendation	Level of evidence	Class of recommendation	Level of evidence	
PCI (assuming suitable anatomy for PCI, appropriate risk stratification, and discussion with the patient)					
Angina CCS classes I-IV despite medical therapy with one-vessel disease			I	A	ACME and MASS
Angina CCS classes I-IV despite medical therapy with multi-vessel disease (non-diabetic)			I	A	RITA 2 and VA-ACME
Stable angina with minimal (CCS class I) symptoms on medication and one-, two-, or three-vessel disease but objective evidence of large ischaemia			IIb	C	ACIP

No angina → ?

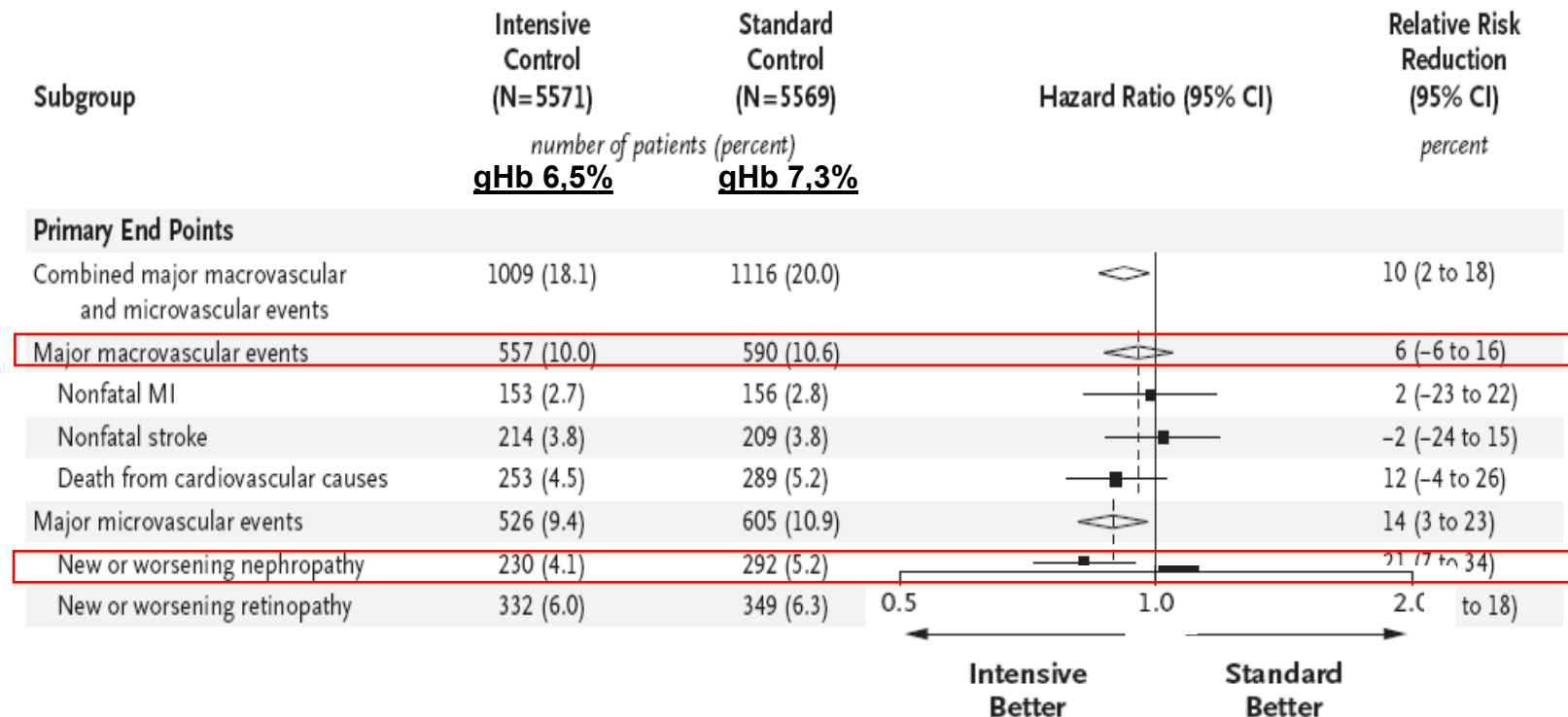
***¿Hasta donde y cómo
bajar la HbA1c?***

Glucose control in ADVANCE



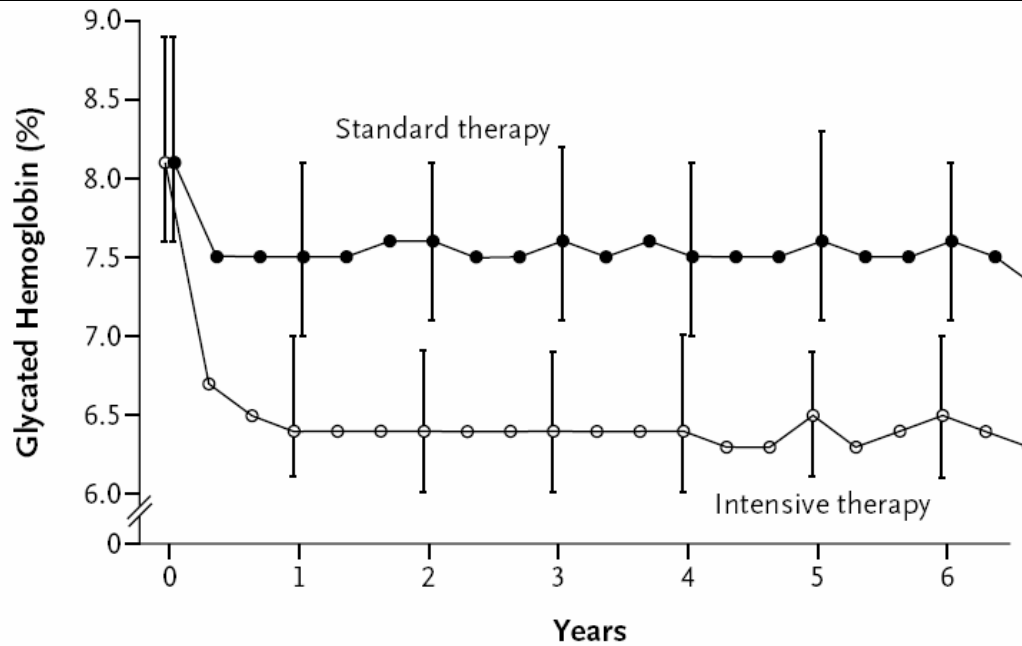
ADVANCE. Control intenso de la glucosa en pacientes diabéticos tipo 2.

El estudio ADVANCE: 11.140 pacientes con DM2 seguidos durante 5 años.



ADVANCE Collaborative Group. N Engl J Med 2008 June 12.

Glucose control in ACCORD



No. at Risk

Standard therapy	5109	4774	4588	3186	1744	455	436
Intensive therapy	5119	4768	4585	3165	1706	476	471

Treatments in intensive control group

Insulin 77%

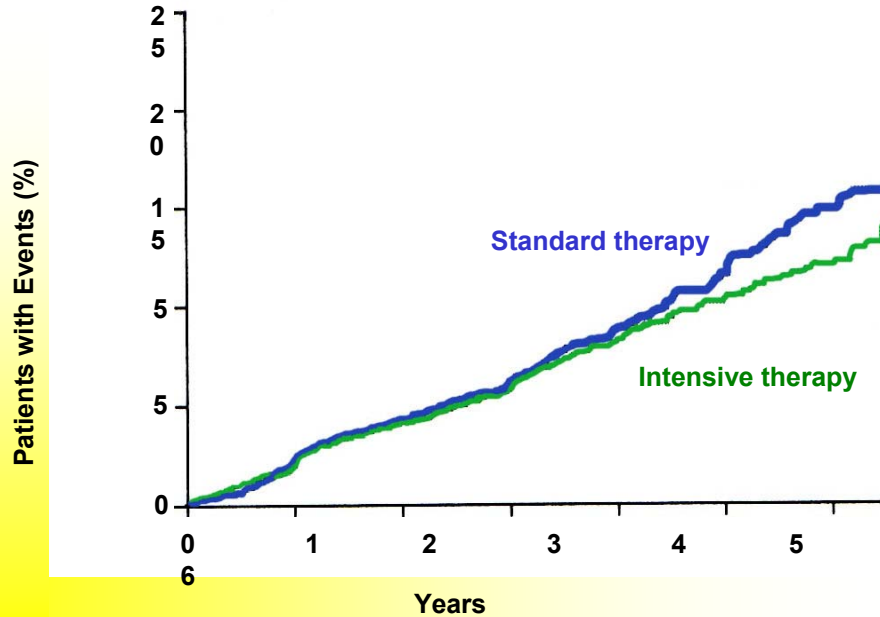
TZD 92%

SU 78%

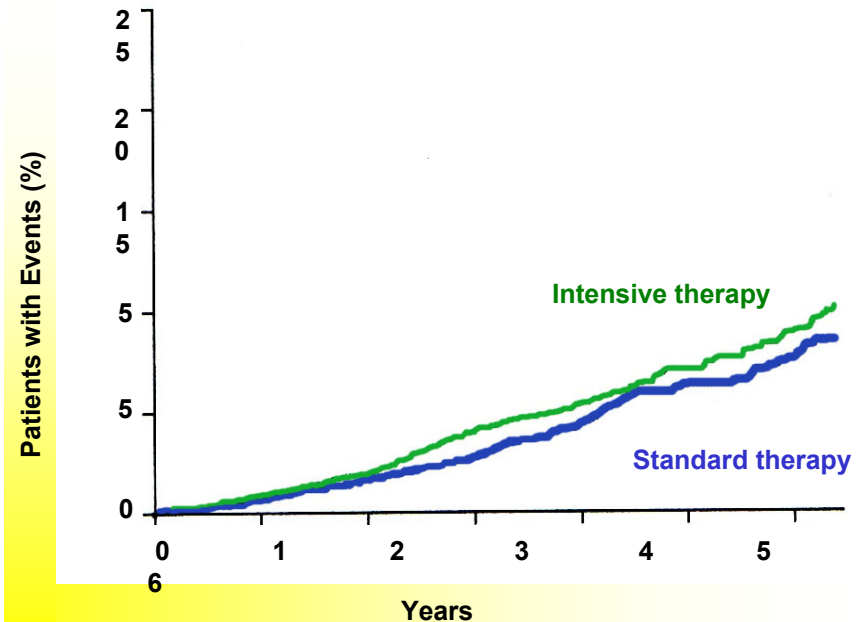
Metformin 95%

ACCORD. Effects of Intensive Glucose Lowering in Type 2 Diabetes

Primary Outcome



Death from Any cause



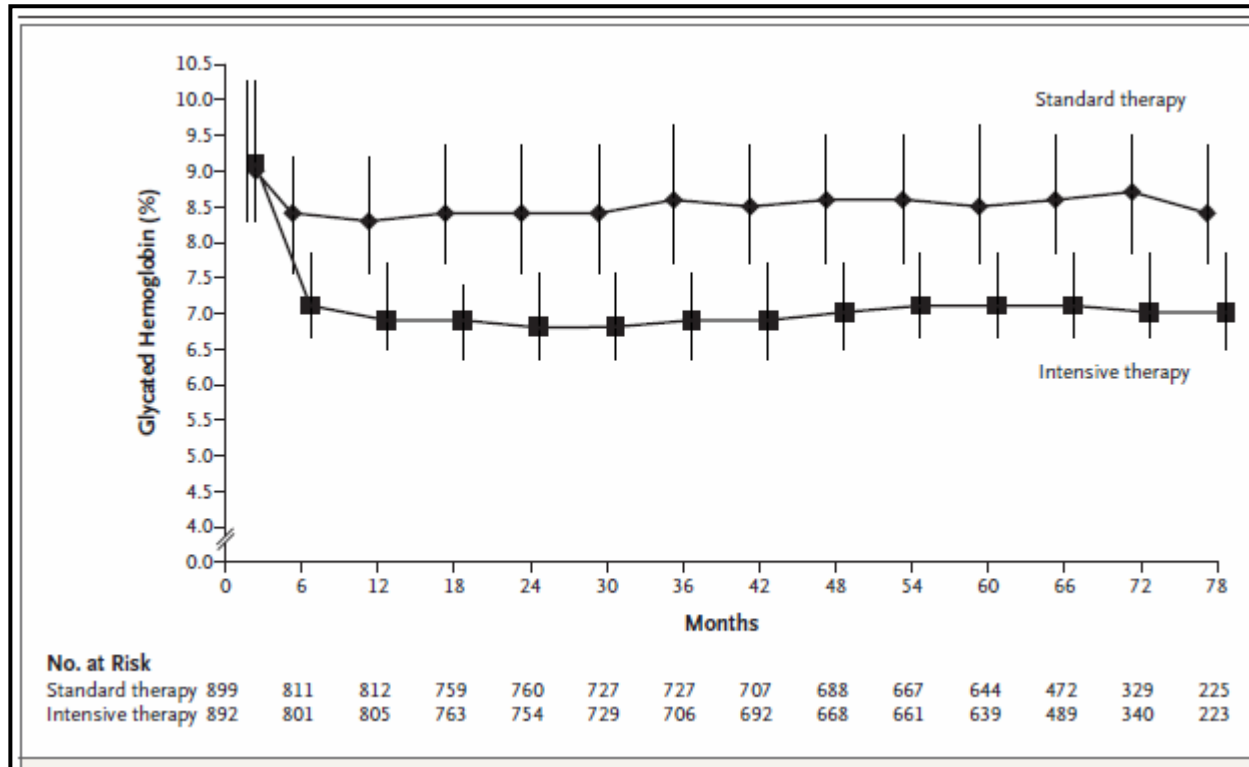
No. at Risk	0	1	2	3	4	5	6
Intensive therapy	5128	4843	4390	2839	1337	475	448
Standard therapy	5123	4827	4262	2702	1186	440	395

No. at Risk	0	1	2	3	4	5	6
Intensive therapy	5128	4972	4880	3250	1748	523	506
Standard therapy	5123	4971	4700	3180	1642	499	480

Diferencias entre ACCORD y ADVANCE

	ADVANCE	ACCORD
Media HbA _{1c}	6.4 %	6.4 %
Hipoglucemias graves	2.5 %	16.2 %
% de fármacos utilizados		
secretagogos	92 %	87 %
metformina	74 %	95 %
glitazonas	17 %	92 %
insulina	40%	77%

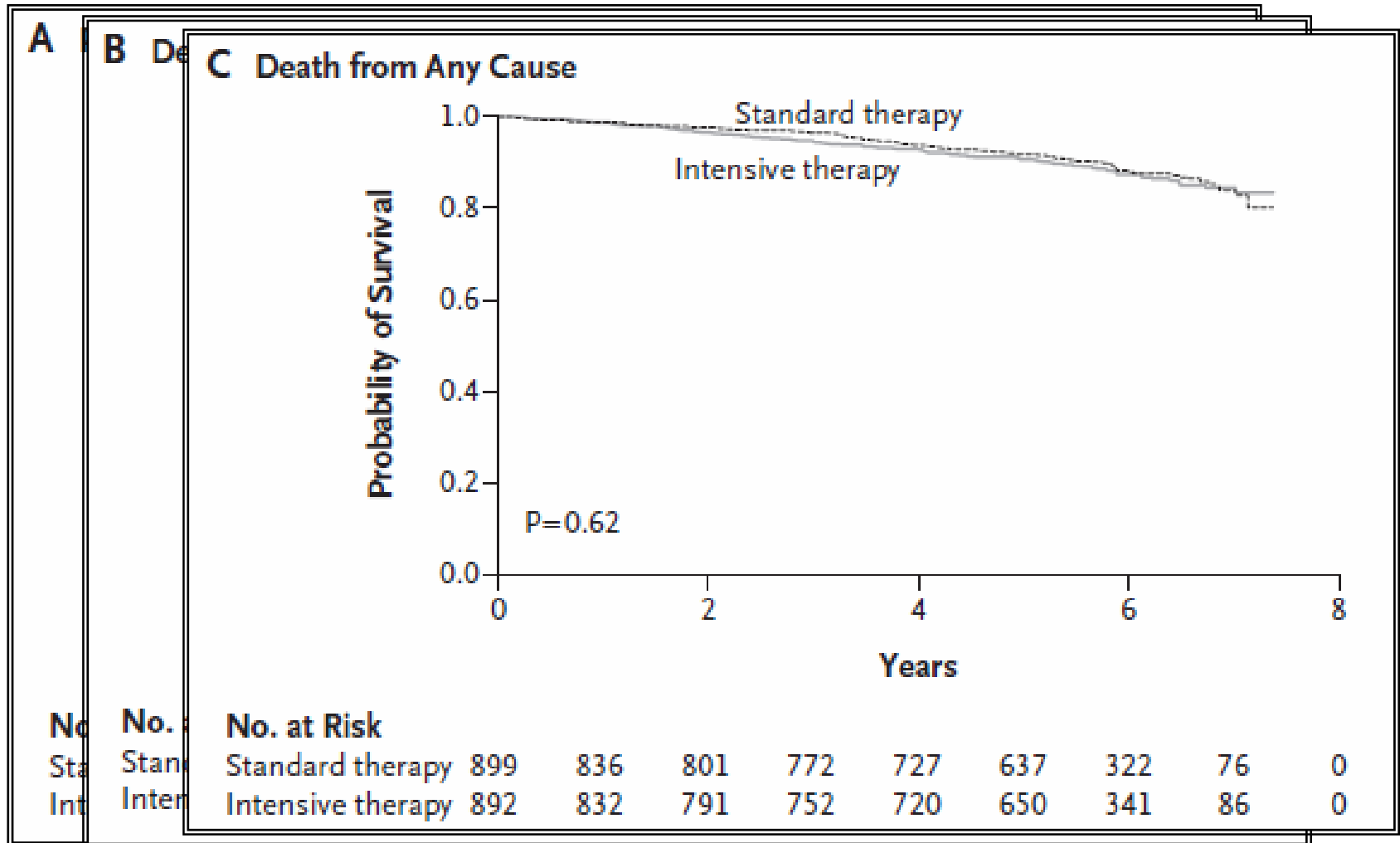
VADT. Resultados



VADT. Resultados

Eventos microvasculares:			
Eventos	T. estándar (N=899)	T. intensiva (N=892)	P valor
	no./no. total (%)		
Incremento de 2 estadios en la severidad de la retinopatía	88/399 (22,1)	69/406 (17,0)	0,07
Cualquier incremento en la albuminuria	48/731 (6,6)	30/728 (4,1)	0,05
Nueva neuropatía autonómica	26/498 (5,2)	38/464 (8,2)	0,07

VADT: Resultados



VADT. Resultados

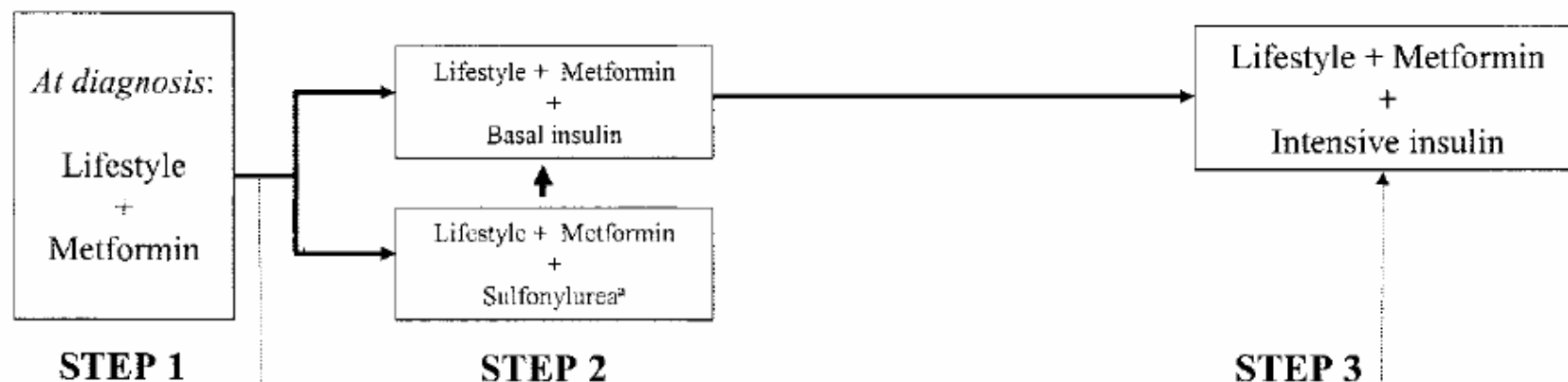
Table 2. Hypoglycemic Episodes.*

Variable	Standard Therapy (N = 899)	Intensive Therapy (N = 892)
	<i>no./100 patient-yr</i>	
Episodes with impaired consciousness	3	9
Episodes with complete loss of consciousness	1	3
Nocturnal episodes	44	152
Total episodes		
With symptoms	383	1333
Without symptoms	49	233
Relieved by food or sugar intake	421	1516
Measurement of blood glucose during episode	348	1392
With documented blood glucose <50 mg/dl (2.8 mmol/liter)	52	203

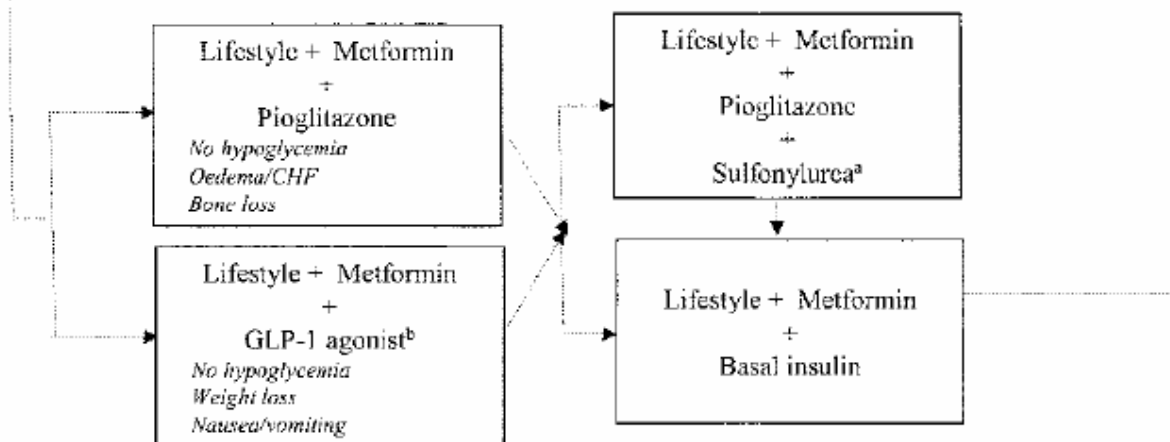
* P<0.001 for all differences between the two groups.

ADA/EASD 2008. Objetivo HbA1c 7 %

Tier 1: Well-validated core therapies



Tier 2: Less well validated therapies



STATEMENT OF ADA, ACC y AHA ***(ADVANCE, ACCORD, VADT)***

- **Enf. Microvascular**
- **Enf. Macrovascular:**

Conclusiones

- **Necesidad de una categorización o tabla de Riesgo del Diabético.**
- Factores:
 - Diagnóstico de DM más de 10 años
 - Tratamiento con Insulina
 - Enf. Vascular o Microvascular
 - Alteración de la F. Renal (MA o $FG < 60$)

 - HTA
 - Dislipemia
 - Tabaquismo

Conclusiones

- Necesidad de una categorización o tabla de Riesgo del diabético.
- Estrategia diagnóstica de la C. Isquémica "similar" a los no diabéticos.
- Indicaciones de tratamiento farmacológico y de revascularización similares a los no diabéticos, aunque con recomendaciones específicas (BSRA, Estatinas, Stents-DES)
- **Control estricto de los objetivos terapéuticos**

Tratamiento

- Tras fracaso con ADOs combinados

 - Se suspende la glimepirida (amaryl)

 - Se inicia tratamiento con insulina glargina (lantus) + misma dosis previa metformina.

- La dosis inicial de insulina glargina es de 22 UI (0.3 UI/ Kg/ dia).administrada en el desayuno.

- Por otra parte se refuerza el cumplimiento de la dieta de 1600 Kcal/dia

- Se insta a la paciente a realizar ejercicio físico diario, consistente en caminar al menos de 30 a 60 minutos.

Se inicia tratamiento para corregir el resto de factores de riesgo:

- Se retira indapamida y se la sustituye por ibersartán (300 mg/día)
(controlar las cifras de PA y conseguir la nefroprotección adecuada.)
- Se asocia hidroclorotiazida
- Se comienza con AAS (100 mg/día) como prevención complicaciones aterotrombóticas
- Se dobla la dosis de simvastatina (20 mg/día) + ezetimibe
(para disminuir el colesterol LDL por debajo 100 mg/dl)

Evolución

- La paciente es instruida sobre el ajuste progresivo de dosis, para alcanzar objetivos de glucemia en ayunas de 100-110 mg/dl.
- Dosis final insulina *Lantus* fue de 38 UI (0.5 UI/Kg/dia)
- En los 9 meses siguientes al inicio del tratamiento se consiguen de manera progresiva unas cifras medias de **Hb1Ac del 7.5 %**.
- Se constata un aumento de peso 2kg..
- No se han producido episodios de hipoglucemia graves
- Las cifras de PA en este momento son de **130/80 mmHg**
- La microalbuminuria ha descendido a **60 mg / g** y el colesterol **LDL a 98 mg/dl**

Conclusión

- La combinación insulina de acción prolongada y metformina es:
 - Terapia sencilla, eficaz y segura tras el fracaso con terapia oral
 - Permite conseguir excelente control metabólico en espacio breve tiempo

- Además la insulinización debe comenzar lo antes posible una vez se ha constatado el fracaso con ADOs

- La finalidad del tratamiento : mantener un buen control metabólico con unas cifras de HbA1c $< 7\%$ *valores recomendados por las guías internacionales y diversos estudios, para prevenir la aparición de complicaciones macro/microvasculares.*

- Pero no sólo debemos tratar las cifras de glucemia, sino todos los demás factores de riesgo asociados, contemplando al **paciente en su conjunto** como individuo de alto riesgo cardiovascular, a fin de prevenir episodios futuros, mortales o no.

Standards of Medical Care in Diabetes—2008

AMERICAN DIABETES ASSOCIATION

Diabetes is a chronic illness that requires continuing medical care and patient self-management education to prevent acute complications and to reduce the risk of long-term complications.

ing methods, was utilized to clarify and codify the evidence that forms the basis for the recommendations. The level of evidence that supports each recommendation is listed after each recommendation

treatment of AIDS or after organ transplantation)

- Gestational diabetes mellitus (GDM) (diabetes diagnosed during pregnancy)

DIABETES CARE, VOLUME 31, SUPPLEMENT 1, JANUARY 2008

Candidates for a further cardiac testing include those with 1) typical or atypical cardiac symptoms and 2) an abnormal resting electrocardiogram (ECG). The screening of asymptomatic patients remains controversial, especially as intensive medical therapy, indicated in diabetic patients at high risk for CVD, has an increasing evidence base for providing equal outcomes to invasive revascularization, including in diabetic patients. There is also recent preliminary evidence that silent myocardial ischemia may reverse over time, adding to the controversy concerning aggressive screening strategies

with diabetes. A grading system (Table 1), developed by the American Diabetes Association (ADA) and modeled after exist-

in action, diseases of the exocrine pancreas (such as cystic fibrosis), and drug- or chemical-induced (such as in the

The recommendations in this article are based on the evidence reviewed in the following publication: Standards of care for diabetes (Technical Review). *Diabetes Care* 17:1514–1522, 1994.

Originally approved 1998. Most recent review/revision, October 2007.

Abbreviations: ABI, ankle-brachial index; ACE, angiotensin-converting enzyme; ADAG, A1C-Derived Average Glucose; ARB, angiotensin receptor blocker; CAD, coronary artery disease; CBG, capillary blood glucose; CHD, coronary heart disease; CHF, congestive heart failure; CKD, chronic kidney disease; CMS, Centers for Medicare and Medicaid Services; CSII, continuous subcutaneous insulin infusion; CVD, cardiovascular disease; DCCT, Diabetes Control and Complications Trial; DKA, diabetic ketoacidosis; DMMP, diabetes medical management plan; DPN, distal symmetric polyneuropathy; DPP, Diabetes Prevention Program; DRS, Diabetic Retinopathy Study; DSME, diabetes self-management education; DSMT, diabetes self-management training; eAG, estimated average glucose; ECG, electrocardiogram; EDIC, Epidemiology of Diabetes Interventions and Complications; ERP, education recognition program; ESRD, end-stage renal disease; ETDRS, Early Treatment Diabetic Retinopathy Study; FDA, Food and Drug Administration; FPG, fasting plasma glucose; GDM, gestational diabetes mellitus; GFR, glomerular filtration rate; ICU, intensive care unit; IFG, impaired fasting glucose; IGT, impaired glucose tolerance; MICU, medical ICU; MNT, medical nutrition therapy; NDEP, National Diabetes Education Program; NPDR, nonproliferative diabetic retinopathy; OGTT, oral glucose tolerance test; PAD, peripheral arterial disease; PDR, proliferative diabetic retinopathy; PPG, postprandial plasma glucose; RAS, renin-angiotensin system; RDA, recommended dietary allowance; SICU, surgical ICU; SMBG, self-monitoring of blood glucose; TSH, thyroid-stimulating hormone; TZD, thiazolidinedione; UKPDS, U.K. Prospective Diabetes Study.

DOI: 10.2337/dc08-S012

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Criteria for the diagnosis of diabetes in nonpregnant adults are shown in Table 2. Three ways to diagnose diabetes are available, and each must be confirmed on a subsequent day unless unequivocal symptoms of hyperglycemia are present. Although the 75-g oral glucose tolerance test (OGTT) is more sensitive and modestly more specific than the FPG to diagnose diabetes, it is poorly reproducible and difficult to perform in practice. Because of ease of use, acceptability to patients, and lower cost, the FPG is the preferred diagnostic test. Although the FPG is less sensitive than the OGTT, the vast majority of people who do not meet diagnostic criteria for diabetes by the FPG but would by the OGTT will have an A1C value well below 7.0% (6).

Although the OGTT is not recommended for routine clinical use, it may be

***Paciente con Enfermedad Coronaria y
alteraciones del metabolismo
hidrocarbonado***

III Reunión de Diabetes y Obesidad



Dr. Vicente Bertomeu Martínez

Las Palmas de Gran Canaria, 29.1.2009

Caso clínico

**Progresión de enfermedad coronaria en
paciente con múltiples factores de riesgo
cardiovascular**



Historia clínica

Paciente varón
FN: 02-02-1955

Julio 2002

Fumador activo	----->	>20 c/d
Dislipemia Mixta		
TG	----->	305 mg/dl
Col Total	----->	247 mg/dl
LDL	----->	148 mg/dl
Sobrepeso	----->	28.7Kg/m ²
Antecedentes personales de C. Isquémica	----->	Padre IAM 55a
No DM	----->	GB: 98 mg/dl
No HTA	----->	135/85 mmHg
Perímetro abdominal	----->	?????

Historia clínica

Paciente varón
FN: 02-02-1955

Julio 2002

Clínica:	Dolor típico en reposo de 20 minutos Estrés emocional ECG normal Elevación de troponina I (4ng/ml)
Ecocardiografía:	Normal
Diagnóstico:	SCASEST
Tratamiento:	Estrategia invasiva precoz

Historia clínica

Paciente varón
FN: 02-02-1955

Julio 2002

Coronariografía:

TCI sin lesiones

Lesión 30% DAm

Oclusión total OM (vaso distal fino)

Suboclusión CDm (aguda)

Angioplastia:

Stent convencional AVE 3.5x12mm a
CD media

Historia clínica

Paciente varón
FN: 02-02-1955

Julio 2002

Tratamiento al alta:

- * AAS 100 mg
- * Clopidogrel 1 mes
- * Tenormín 25 mg/12h
- * Mononitrato de isosorbide : 20mg/12h
- * Fenofibrato 200 mg/24h
- * Medidas dietéticas y consejo para abandono tabaco (explícito en informe)

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2006

Fumador activo ----->	20 c/d
Dislipemia Mixta	
TG ----->	138 mg/dl
Col Total ----->	229 mg/dl (150)
LDL ----->	122 mg/dl
Sobrepeso ----->	27.7 Kg/m ²
HTA ----->	180/90 mmHg
Antecedentes personales de C. Isquémica ----->	Padre IAM 55a
No DM ----->	GB: 107 mg/dl
Perímetro abdominal ----->	?????

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2006

Fumador activo	----->	20 c/d
Dislipemia Mixta		
TG	----->	138 mg/dl
Col Total	----->	229 mg/dl (150)
LDL	----->	122 mg/dl
Sobrepeso	----->	27.7 Kg/m ²
HTA	----->	180/90 mmHg
Antecedentes personales de C. Isquémica	----->	Padre IAM 55a
No DM	----->	GB: 107 mg/dl
Perímetro abdominal	----->	?????

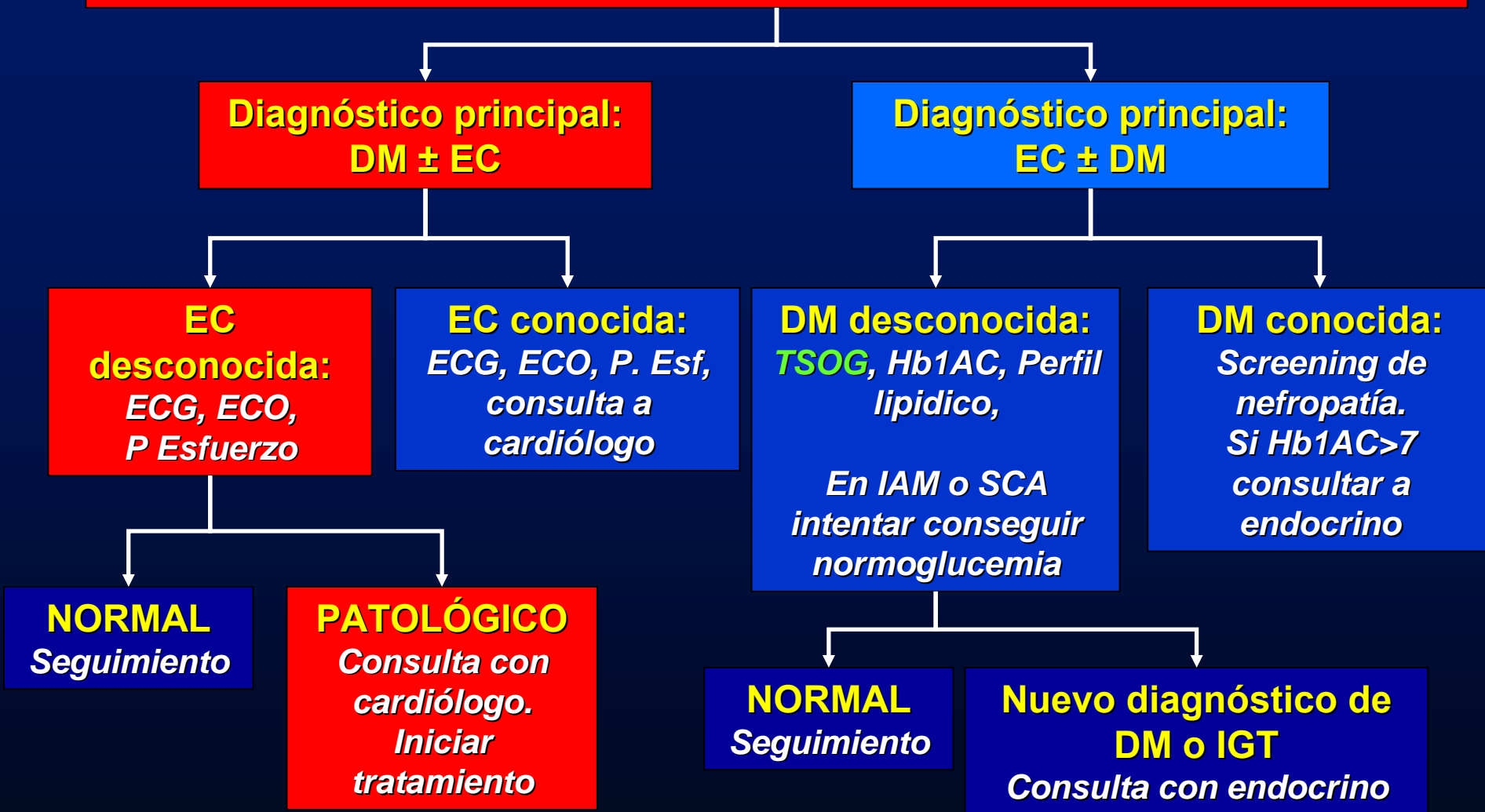
Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2006

Fumador activo	----->	20 c/d
Dislipemia Mixta		
TG	----->	138 mg/dl
Col Total	----->	229 mg/dl (150)
LDL	----->	122 mg/dl
Sobrepeso	----->	27.7 Kg/m ²
HTA	----->	180/90 mmHg
Antecedentes personales de C. Isquémica	----->	Padre IAM 55a
No DM	----->	GB: 107 mg/dl
Perímetro abdominal	----->	?????

ENFERMEDAD CORONARIA Y DIABETES MELLITUS



Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2006

Categoría Glucometabólica	Fuente	Criterios analíticos (mg/dL)
Regulación normal glucosa (NGR)	<i>WHO</i> <i>ADA</i>	Glu. ayunas < 110 + 2hPG < 140 Glu ayunas < 100 + 2hPG < 140
Glucosa alterada ayunas (IFG)	<i>WHO</i> <i>ADA</i>	$110 \leq \text{Glu ayunas} < 126$ $100 \leq \text{Glu ayunas} < 126$
Tolerancia glucosa alterada (IGT)	<i>WHO</i> <i>ADA</i>	$140 \leq 2\text{h PG} < 200$
Diabetes Mellitus	<i>WHO</i> <i>ADA</i>	Glu. ayunas ≥ 126 + 2hPG ≥ 140 Glu ayunas ≥ 126 + 2hPG ≥ 140

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2006

Categoría Glucometabólica	Fuente	Criterios analíticos (mg/dL)	Niveles paciente (mg/dl)
Regulación normal glucosa (NGR)	<i>WHO</i> <i>ADA</i>	Glu. ayunas < 110 + 2hPG < 140 Glu ayunas < 100 + 2hPG < 140	
Glucosa alterada ayunas (IFG)	<i>WHO</i> <i>ADA</i>	110 ≤ Glu ayunas < 126 100 ≤ Glu ayunas < 126	NO 107
Tolerancia glucosa alterada (IGT)	<i>WHO</i> <i>ADA</i>	140 ≤ 2h PG < 200	159
Diabetes Mellitus	<i>WHO</i> <i>ADA</i>	Glu. ayunas ≥ 126 + 2hPG ≥ 140 Glu ayunas ≥ 126 + 2hPG ≥ 140	

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2006

Categoría Glucometabólica	Fuente	Criterios analíticos (mg/dL)	Niveles paciente (mg/dl)
Regulación normal glucosa (NGR)	<i>WHO</i> <i>ADA</i>	Glu. ayunas < 110 + 2hPG < 140 Glu ayunas < 100 + 2hPG < 140	
Glucosa alterada ayunas (IFG)	<i>WHO</i> <i>ADA</i>	110 ≤ Glu ayunas < 126 100 ≤ Glu ayunas < 126	NO 95
Tolerancia glucosa alterada (IGT)	<i>WHO</i> <i>ADA</i>	140 ≤ 2h PG < 200	159
Diabetes Mellitus	<i>WHO</i> <i>ADA</i>	Glu. ayunas ≥ 126 + 2hPG ≥ 140 Glu ayunas ≥ 126	

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2006

Clínica:	Dolor típico caminando de 30 minutos Angor desde 2 semanas previas ECG normal Elevación de troponina I (2,5 ng/ml)
Ecocardiografía:	FEVI 55%. Hipocinesia leve inferior
Diagnóstico:	SCASEST
Tratamiento:	Estrategia invasiva precoz

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2006

Coronariografía:

TCI sin lesiones

Lesión 40% DAm

Oclusión total OM (vaso distal fino)

Lesión 99% CD distal (trombo)

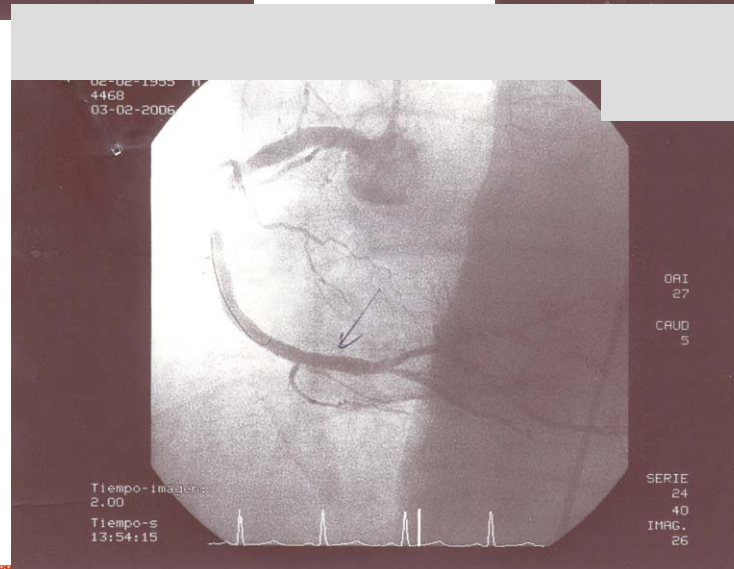
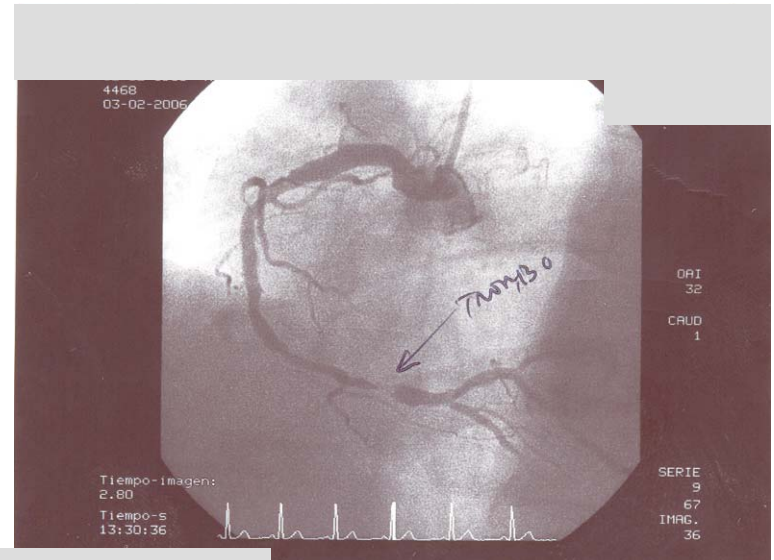
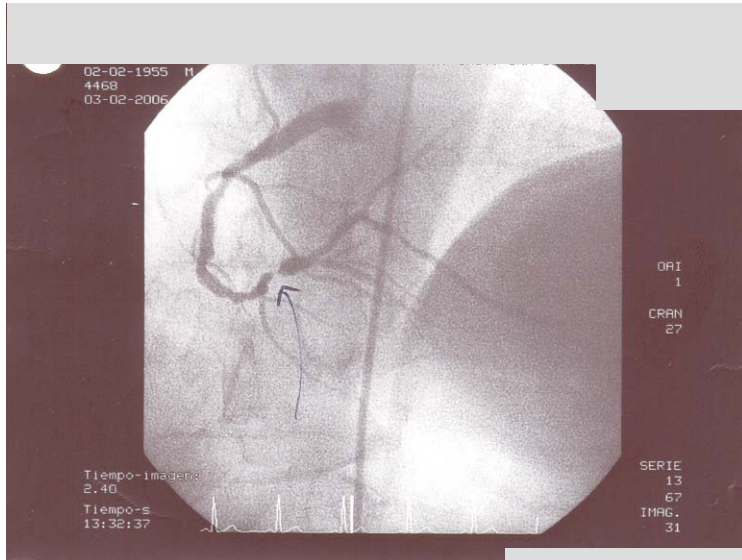
Angioplastia:

Stent Farmacoactivo Taxus 3.5x28mm
en CD distal

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2006



Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2006

Tratamiento al alta:

- * AAS 100 mg
- * Clopidogrel 75 mg 1 año
- * Carvedilol 25: 1/2 comp cada 12 horas
- * Perindopril 4 mg/12h
- * Mononitrato de isosorbide liberación prolongada: 50mg/24h
- * Atorvastatina 20 mg/24h
- * Medidas dietéticas y consejo para abandono tabaco (explícito en informe)

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2008

Fumador activo	----->	10 c/d
Dislipemia		
TG	----->	108 mg/dl
Col Total	----->	140 mg/dl (108)
LDL	----->	92 mg/dl
Sobrepeso	----->	29 Kg/m ²
HTA	----->	165/90 mmHg
Antecedentes personales de C. Isquémica	----->	Padre IAM 55a
Prediabetes	----->	GB: 112 mg/dl
Perímetro abdominal	----->	104 Cm

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2008

Fumador activo ----->	10 c/d
Dislipemia	
TG ----->	108 mg/dl
Col Total ----->	140 mg/dl (108)
LDL ----->	92 mg/dl
Sobrepeso ----->	29 Kg/m ²
HTA ----->	165/90 mmHg
Antecedentes personales de C. Isquémica ----->	Padre IAM 55a
Prediabetes ----->	GB: 112 mg/dl
Perímetro abdominal ----->	104 Cm

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2008

Fumador activo ----->	10 c/d
Dislipemia Mixta	
TG ----->	148 mg/dl
Col Total ----->	140 mg/dl (108)
LDL ----->	92 mg/dl
Sobrepeso ----->	29 Kg/m2
HTA ----->	165/90 mmHg
Antecedentes personales de C. Isquémica ----->	Padre IAM 55a
Prediabetes ----->	GB: 112 mg/dl
Perímetro abdominal ----->	104 Cm

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2008

Fumador activo	----->	10 c/d
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Prediabetes	----->	GB: 112 mg/dl
Perímetro abdominal	----->	104 Cm

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2008

Categoría Glucometabólica	Fuente	Criterios analíticos (mg/dL)	Niveles paciente (mg/dl)
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Glucosa alterada ayunas (IFG)	<i>WHO</i> <i>ADA</i>	$110 \leq \text{Glu ayunas} < 126$ $100 \leq \text{Glu ayunas} < 126$	112
Tolerancia glucosa alterada (IGT)	<i>WHO</i> <i>ADA</i>	$140 \leq 2\text{h PG} < 200$	157
Diabetes Mellitus	<i>WHO</i> <i>ADA</i>	Glu. ayunas ≥ 126 + 2hPG ≥ 140 Glu ayunas ≥ 126	

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2008

Clínica:

Angor esfuerzo clase II CCS

Inicio 3 meses antes

ECG reposo normal

Ecocardiografía:

FEVI 55%. Hipocinesia leve inferior y lateral

Diagnóstico:

Angor de esfuerzo estable

Estrategia:

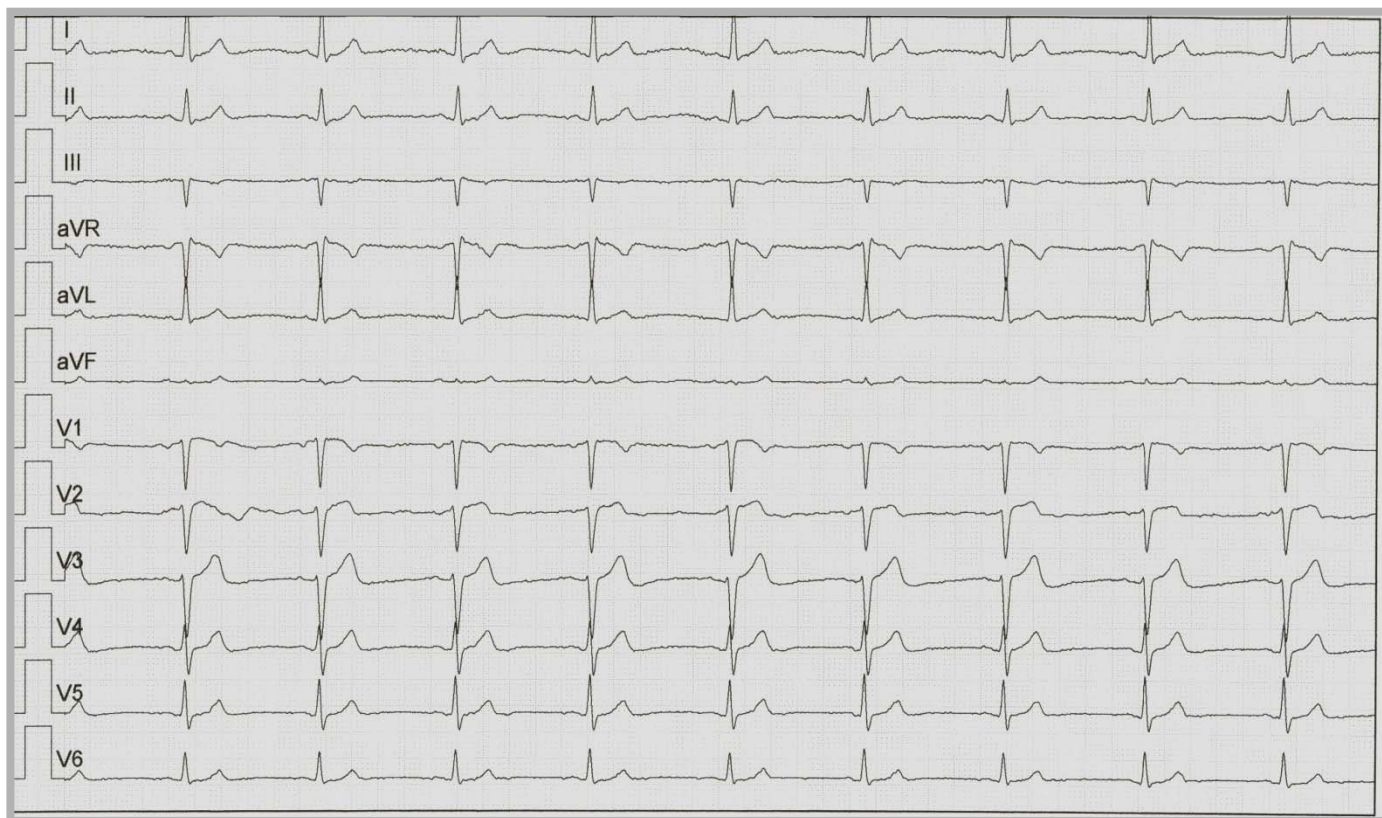
Ergometría

Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2008

ECG BASAL (REPOSO, ASINTOMÁTICO)

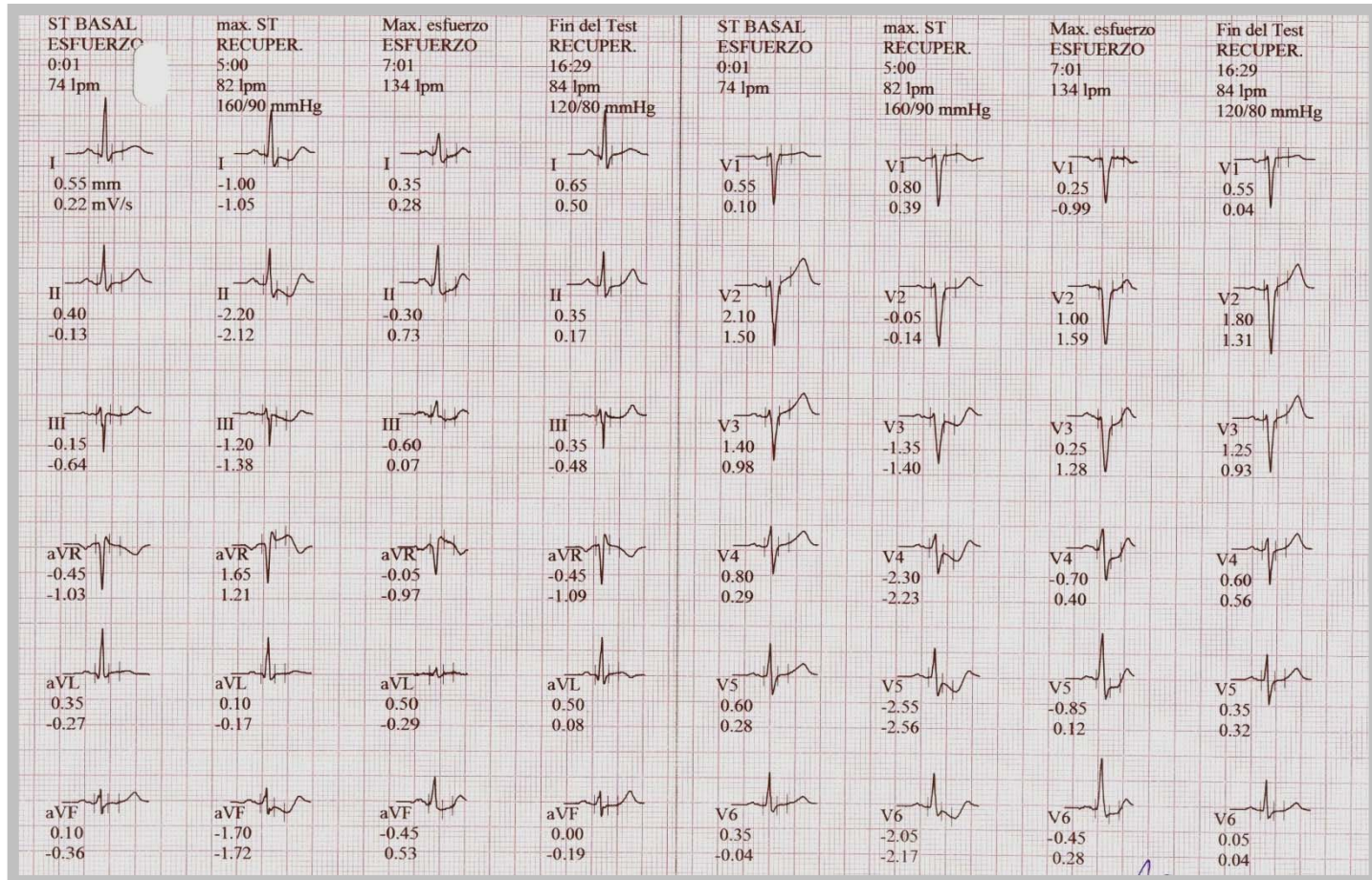


Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2008

ERGOMETRÍA

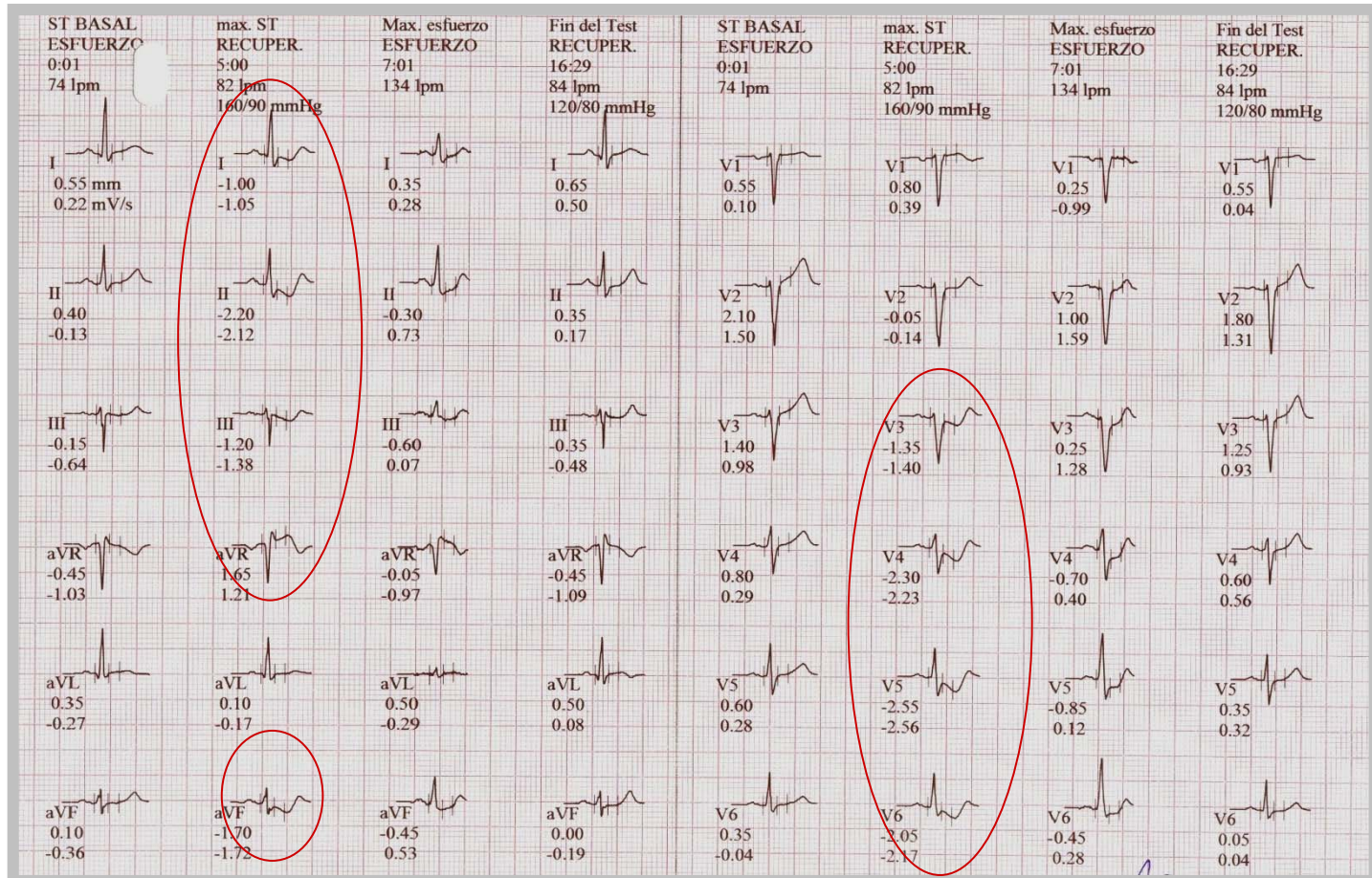


Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2008

ERGOMETRÍA



Historia clínica

Paciente varón
FN: 02-02-1955

Febrero 2008

PLAN ACTUACIÓN

** Medidas dietéticas y consejo para abandono tabaco*

* AAS 100 mg

* Clopidogrel 75 mg

* Carvedilol 25: 1 comp cada 12 horas

* Ramipril 10 mg/24h

* Mononitrato de isosorbide liberación prolongada: 50mg/24h

* Amlodipino 10 mg/24h

* Atorvastatina 40 mg/24h

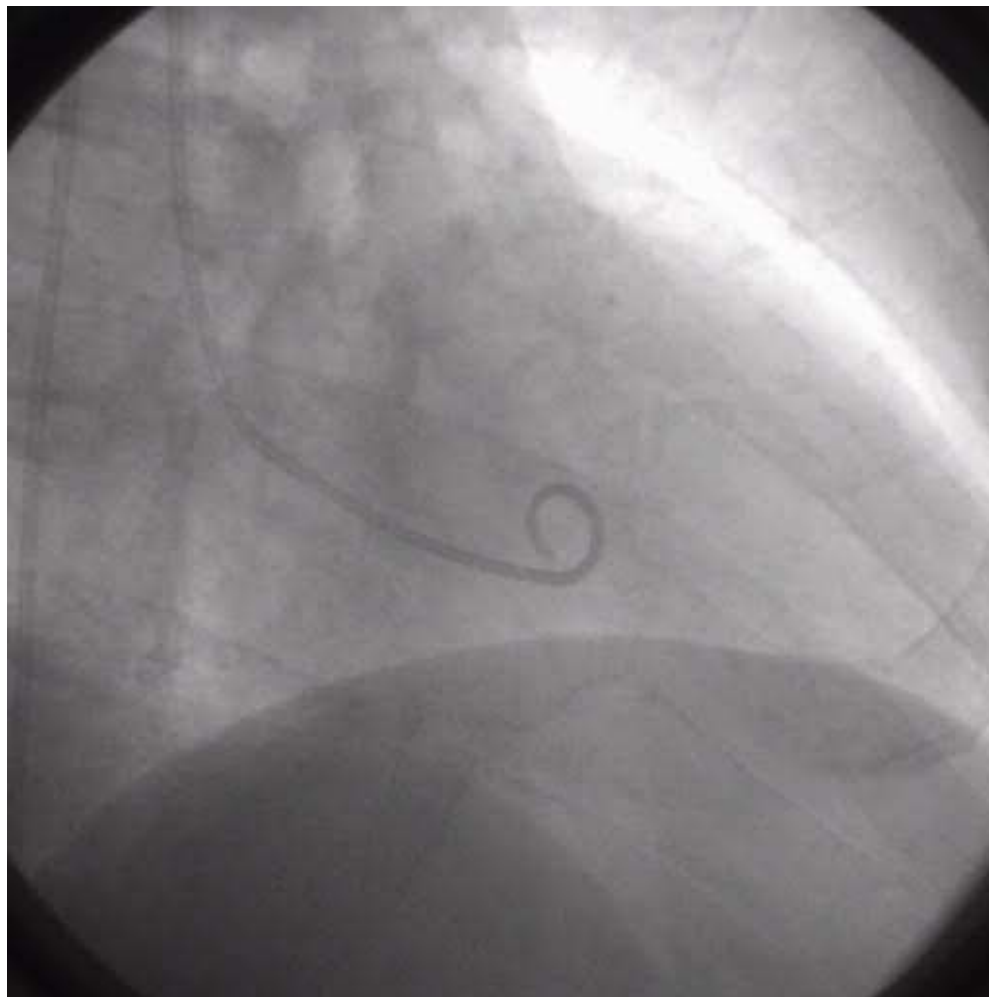
** SOLICITUD CORONARIOGRAFÍA AMBULATORIA*

Historia clínica

Paciente varón
FN: 02-02-1955

Marzo 2008. Coronariografía

Ventriculografía

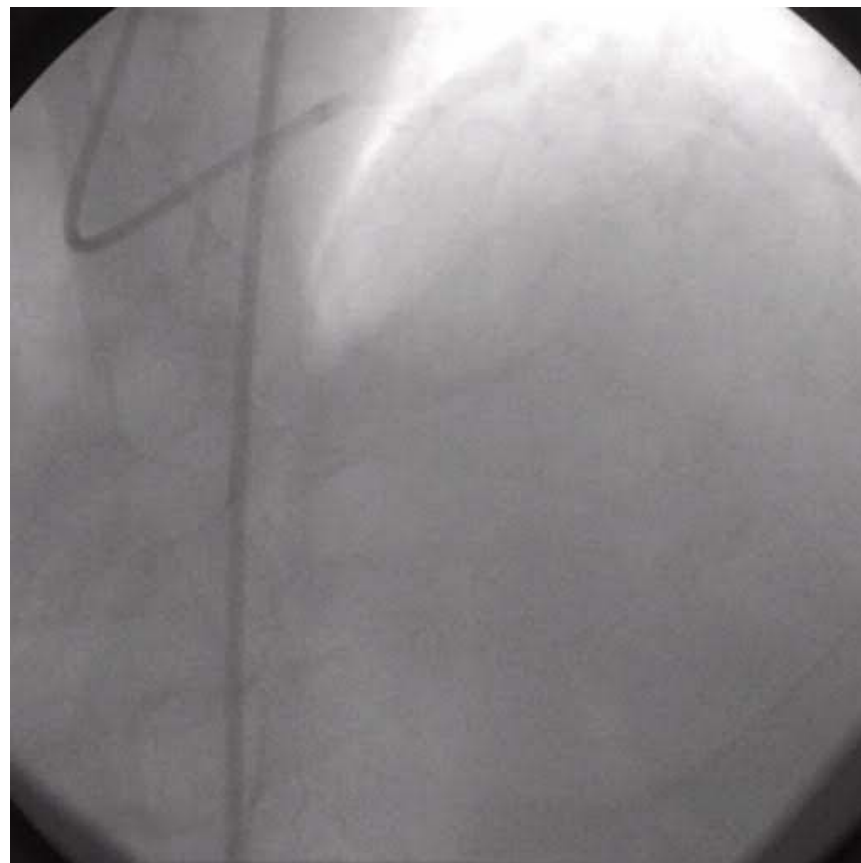
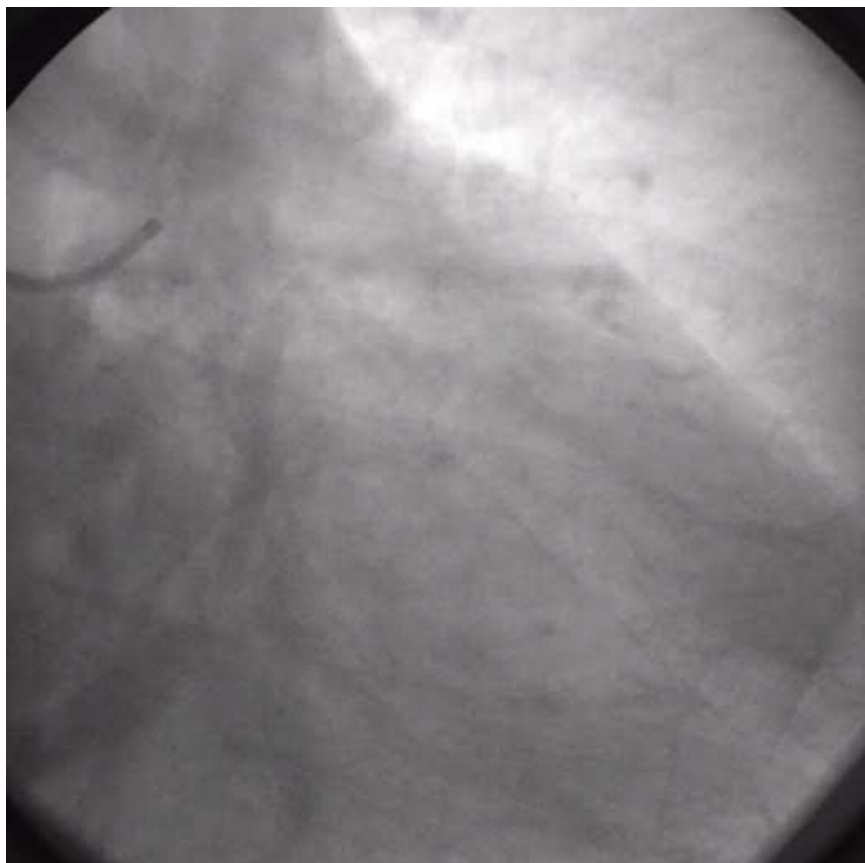


Historia clínica

Paciente varón
FN: 02-02-1955

Marzo 2008. Coronariografía

Lesión severa DA media y Lesión severa Cx proximal-distal

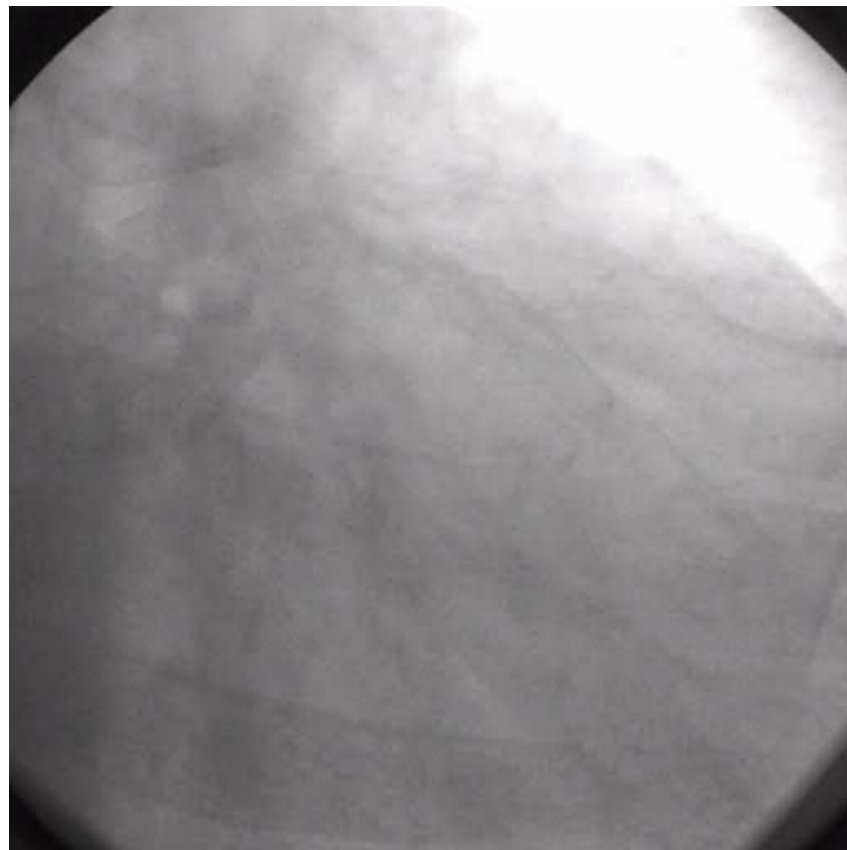
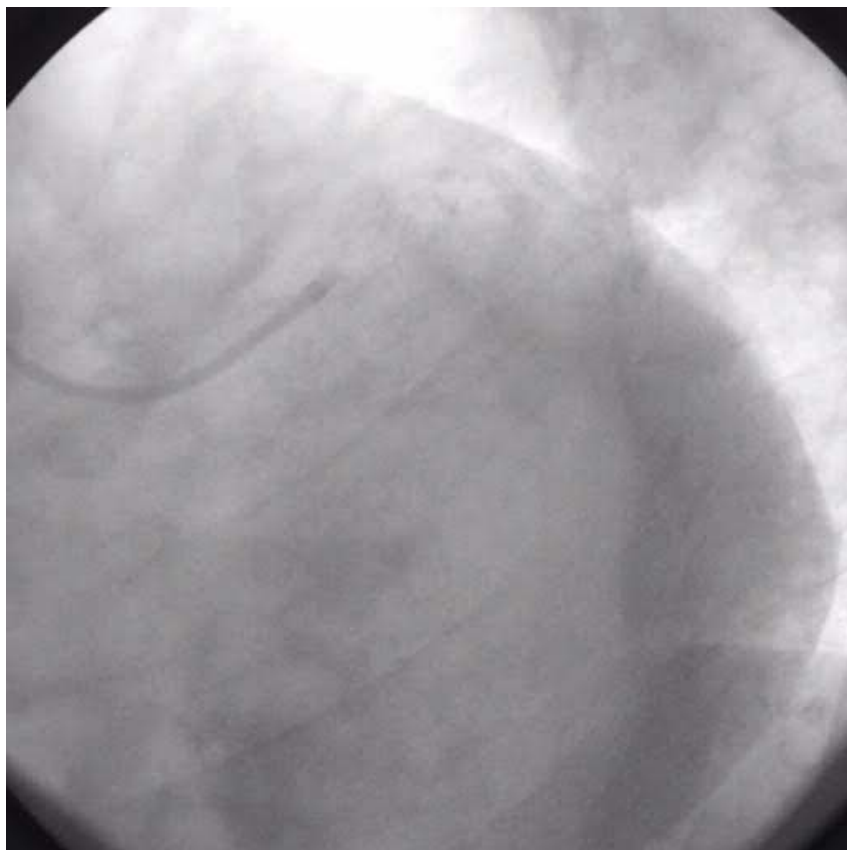


Historia clínica

Paciente varón
FN: 02-02-1955

Marzo 2008. Coronariografía

Lesión severa DA media y Lesión severa Cx proximal-distal

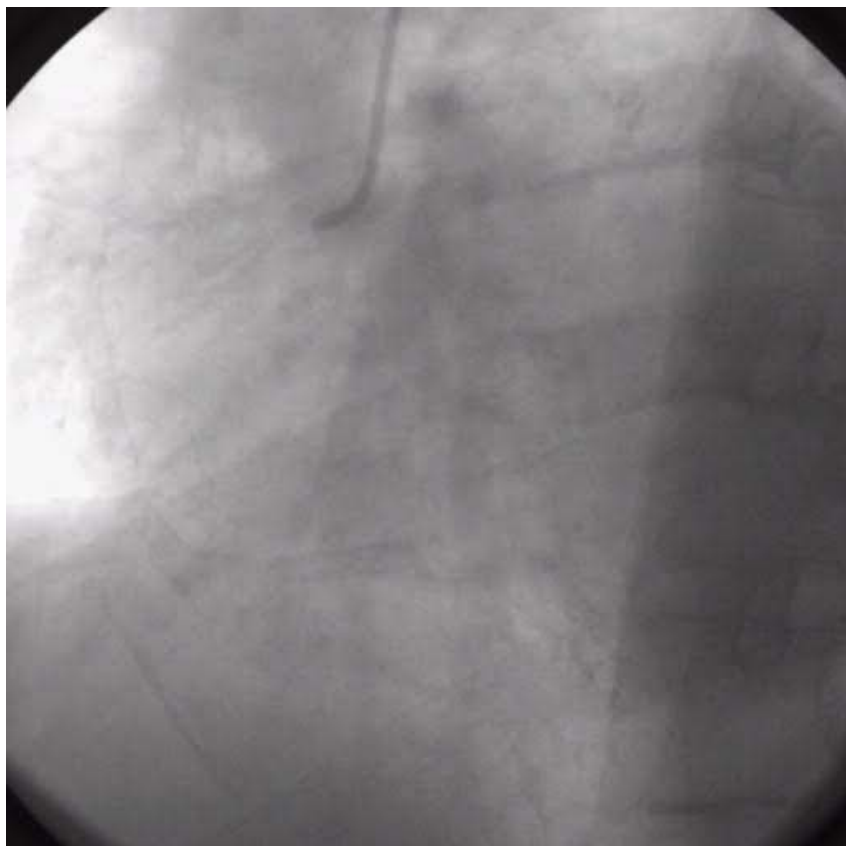


Historia clínica

Paciente varón
FN: 02-02-1955

Marzo 2008. Coronariografía

Lesión moderada CD media y Lesión severa rama PL



Historia clínica

Paciente varón
FN: 02-02-1955

Marzo 2008. Coronariografía

RESUMEN: ENFERMEDAD DE TRES VASOS

- TCI:** Sin lesiones
- DA:** Ateromatosis difusa. Lesión 80% DAm
- CX:** Lesión 75% proximal-distal.
Oclusión total OM (vaso distal fino)
- CD:** Lesión moderada tercio medio proximal a 1ºstent
Lesión severa rama PL

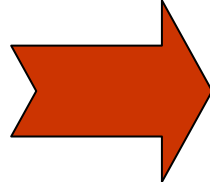
Historia clínica

**Julio de
2002**

47 años

SCASEST
Enf. 2 vasos: OM2 y
CD media
ACTP y stent
convencional CDm

Asintomático

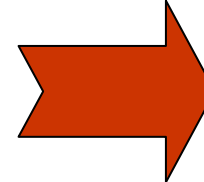


**Febrero de
2006**

51 años

SCASEST
Enf. 2 vasos: OM2 y
CD distal
ACTP y stent
Farmacoactivo CDd

Asintomático



**Febrero de
2008**

53 años

Angor estable 3
meses
Ergometría positiva
Enfermedad de 3
vasos: DAm, CXd y
PL

FACTORES RIESGO CVC

Historia clínica

Paciente varón
FN: 02-02-1955

Abril 2008.

Tras coronariografía: SESIÓN CLÍNICA

OPCIONES:

- * ¿Tratamiento médico?*
- * ¿Revascularización quirúrgica?*
- * ¿Revascularización percutánea?*

Historia clínica

Paciente varón
FN: 02-02-1955

Abril 2008.

Tras coronariografía: SESIÓN CLÍNICA

OPCIONES:

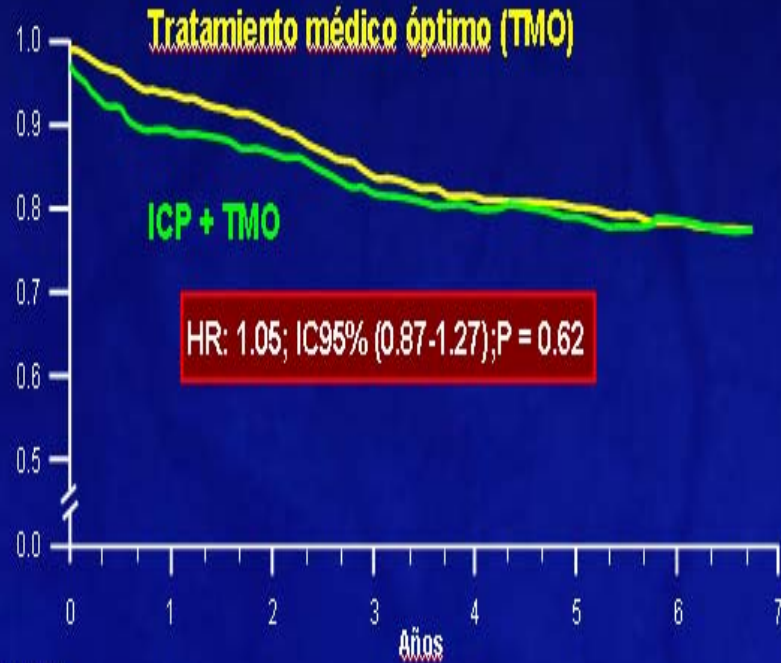
* *¿Tratamiento médico?*

* *¿Revascularización quirúrgica?*

* *¿Revascularización percutánea?*

Estudio COURAGE. Resultados

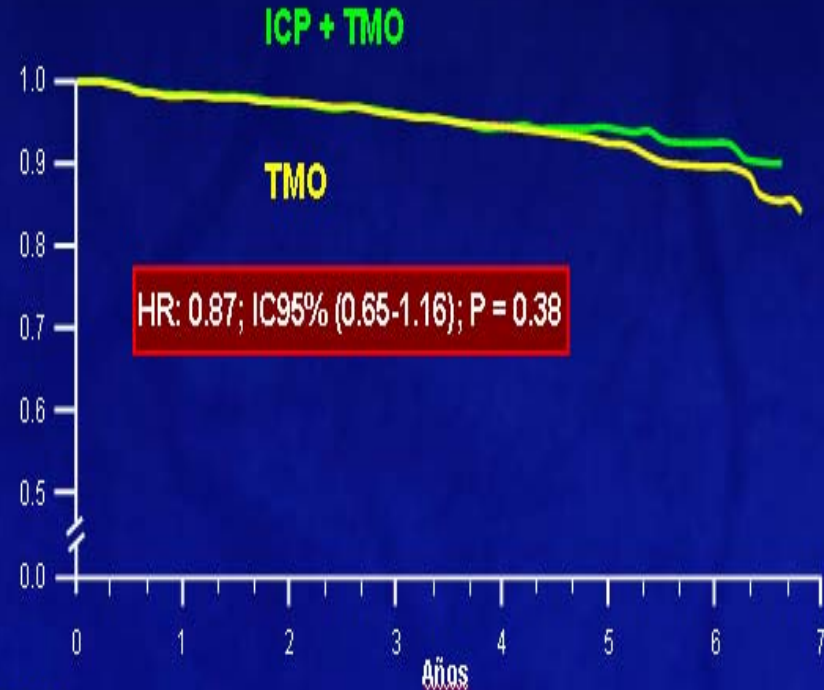
Supervivencia Libre de Muerte por cualquier causa e Infarto de Miocardio



Número en riesgo

Tto. Médico	1138	1017	959	834	638	408	192	30
ICP	1149	1013	952	833	637	417	200	35

Supervivencia Global



Número en riesgo

Tto. Médico	1138	1073	1029	917	717	468	302	38
ICP	1149	1094	1051	929	733	488	312	44

Optimal Medical Therapy with or without PCI for Stable Coronary Disease

William E. Boden, M.D., Robert A. O'Rourke, M.D., Koon K. Teo, M.B., B.Ch., Ph.D., Pamela M. Hartigan, Ph.D., David J. Maron, M.D., William J. Kostuk, M.D., Merril Knudtson, M.D., Marcin Dada, M.D., Paul Casperson, Ph.D., Crystal L. Harris, Pharm.D., Bernard R. Chaitman, M.D., Leslee Shaw, Ph.D., Gilbert Gosselin, M.D., Shah Nawaz, M.D., Lawrence M. Title, M.D., Gerald Gau, M.D., Alvin S. Blaustein, M.D., David C. Booth, M.D., Eric R. Bates, M.D., John A. Spertus, M.D., M.P.H., Daniel S. Berman, M.D., G.B. John Mancini, M.D., and William S. Weintraub, M.D., for the COURAGE Trial Research Group*

STUDY POPULATION

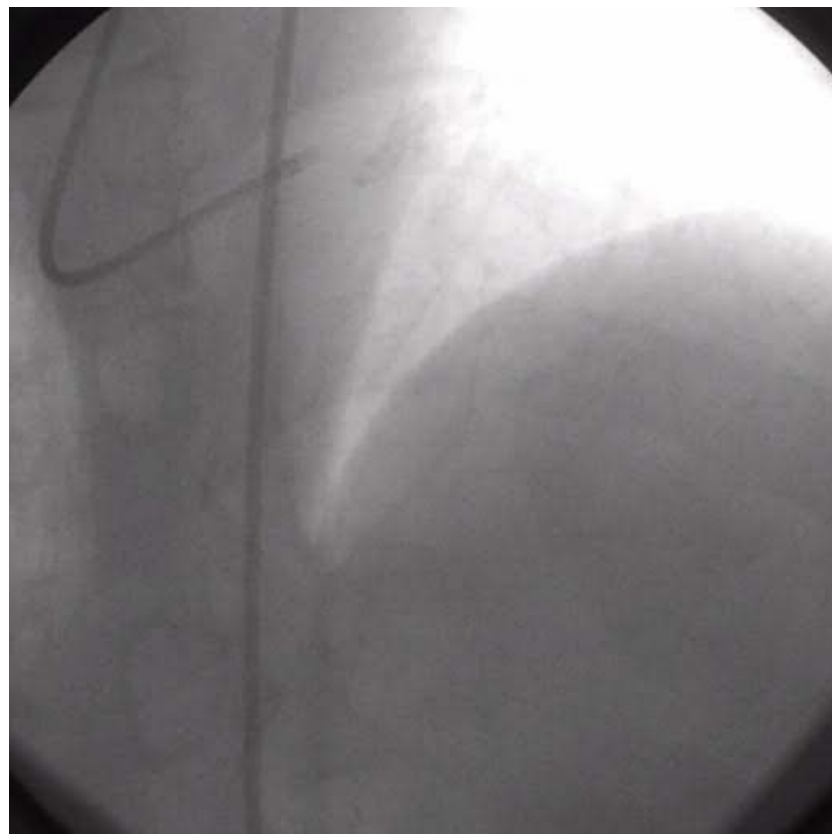
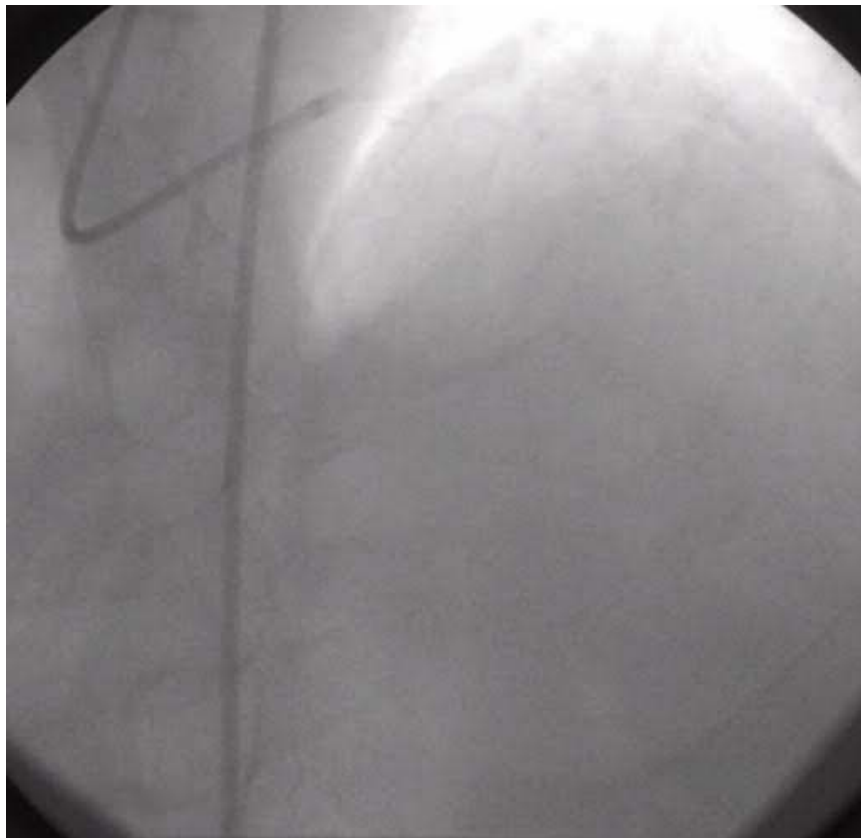
Patients with stable coronary artery disease and those in whom initial Canadian Cardiovascular Society (CCS) class IV angina subsequently stabilized medically were included in the study. **Entry criteria included** stenosis of at least 70% in at least one proximal epicardial coronary artery and objective evidence of myocardial ischemia (substantial changes in ST-segment depression or T-wave inversion on the resting electrocardiogram or inducible ischemia with either exercise or pharmacologic vasodilator stress) or at least one coronary stenosis of at least 80% and classic angina without provocative testing. **Exclusion criteria** included persistent CCS class IV angina, a markedly positive stress test (substantial ST-segment depression or hypotensive response during stage 1 of the Bruce protocol), refractory heart failure or cardiogenic shock, an ejection fraction of less than 30%, revascularization within the previous 6 months, and coronary anatomy not suitable for PCI. A detailed description of the inclusion and exclusion criteria is included in the Supplementary Appendix (available with the full text of this article at www.nejm.org). Patients who were eligible for the study underwent randomization after providing written informed consent.

Historia clínica

Paciente varón
FN: 02-02-1955

Abril 2008. Angioplastia Multivaso

Angioplastia sobre DA



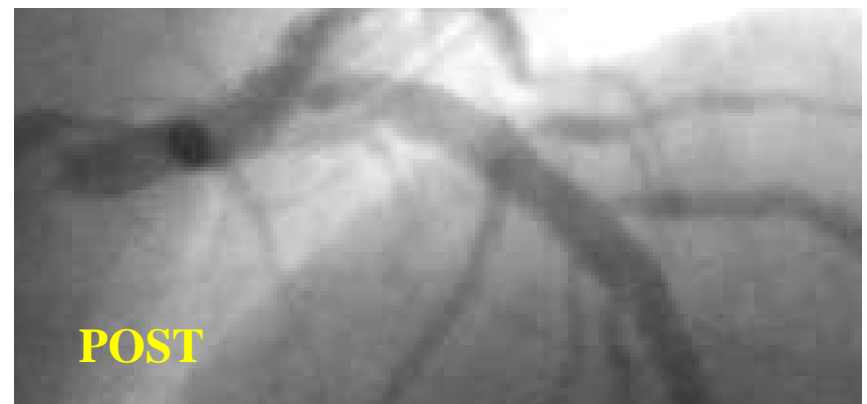
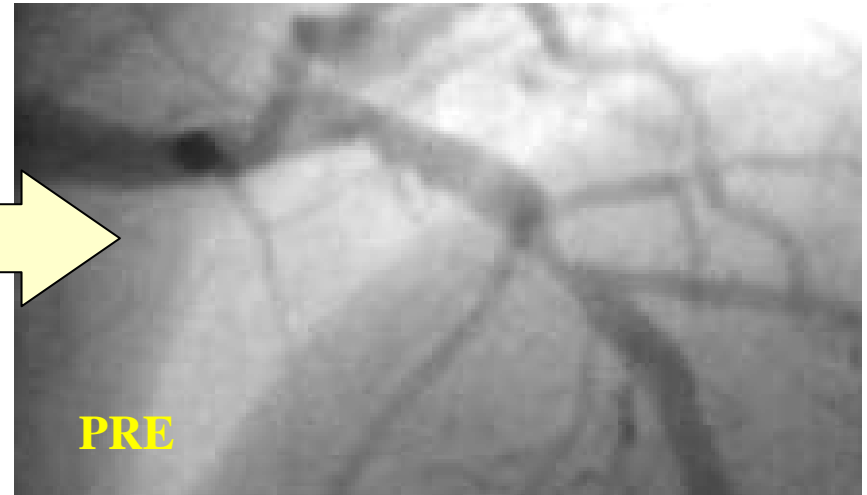
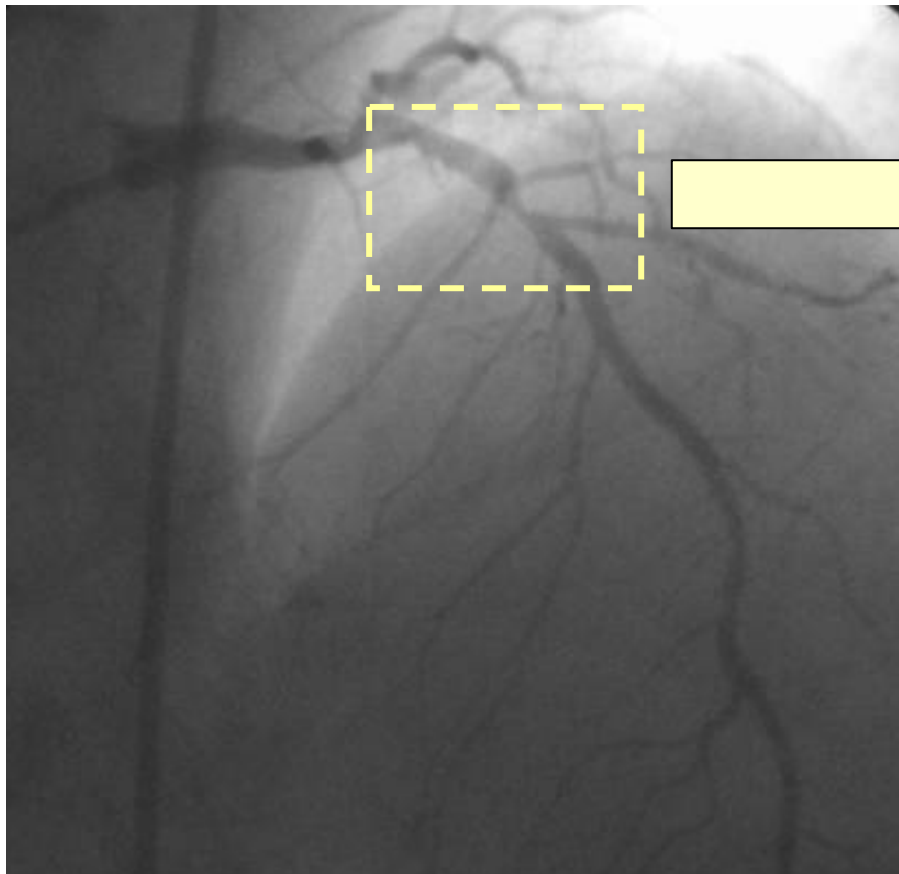
Stent Taxus Liberté 3x16 mm

Historia clínica

Paciente varón
FN: 02-02-1955

Abril 2008. Angioplastia Multivaso

Angioplastia sobre DA



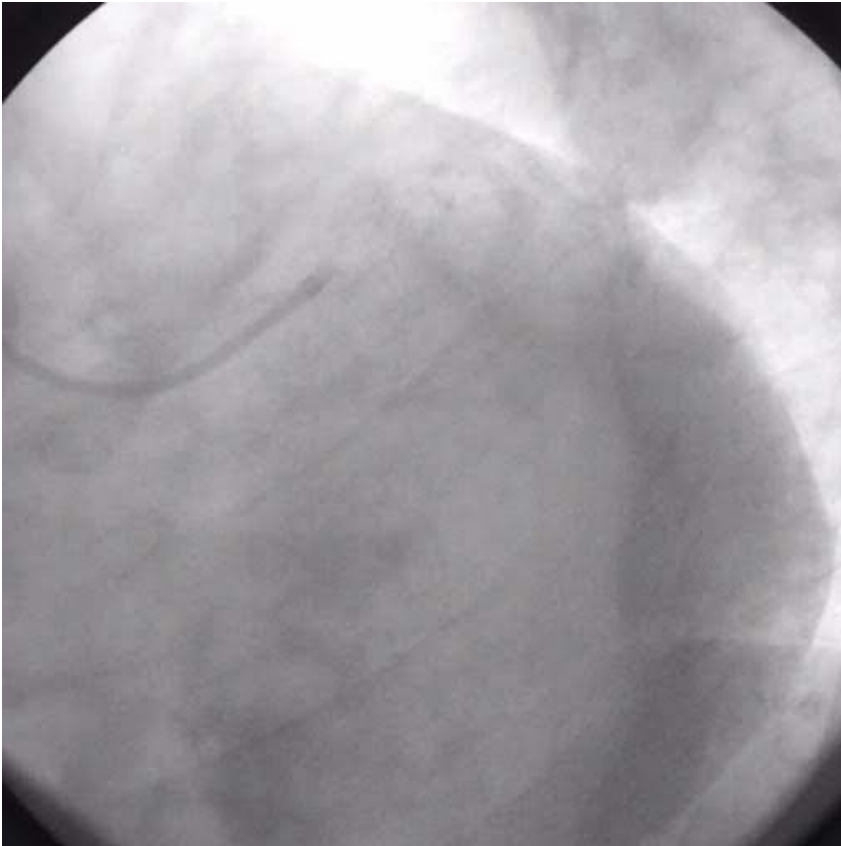
Stent Taxus Liberté 3x16 mm

Historia clínica

Paciente varón
FN: 02-02-1955

Abril 2008. Angioplastia Multivaso

Angioplastia sobre CX



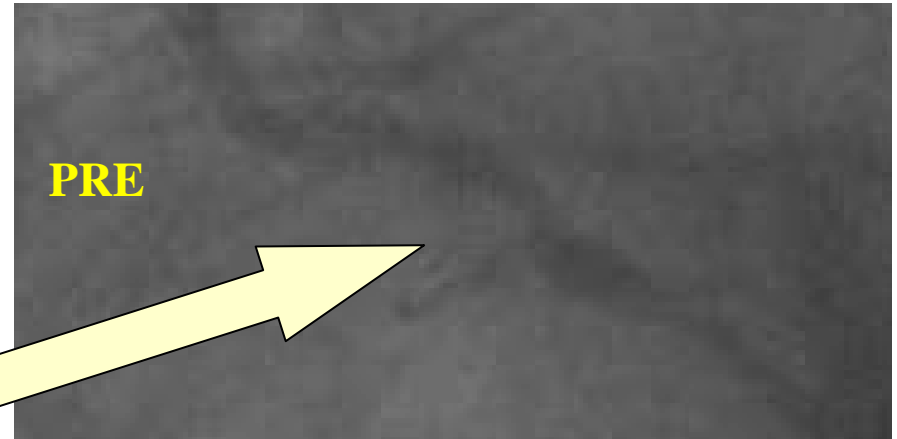
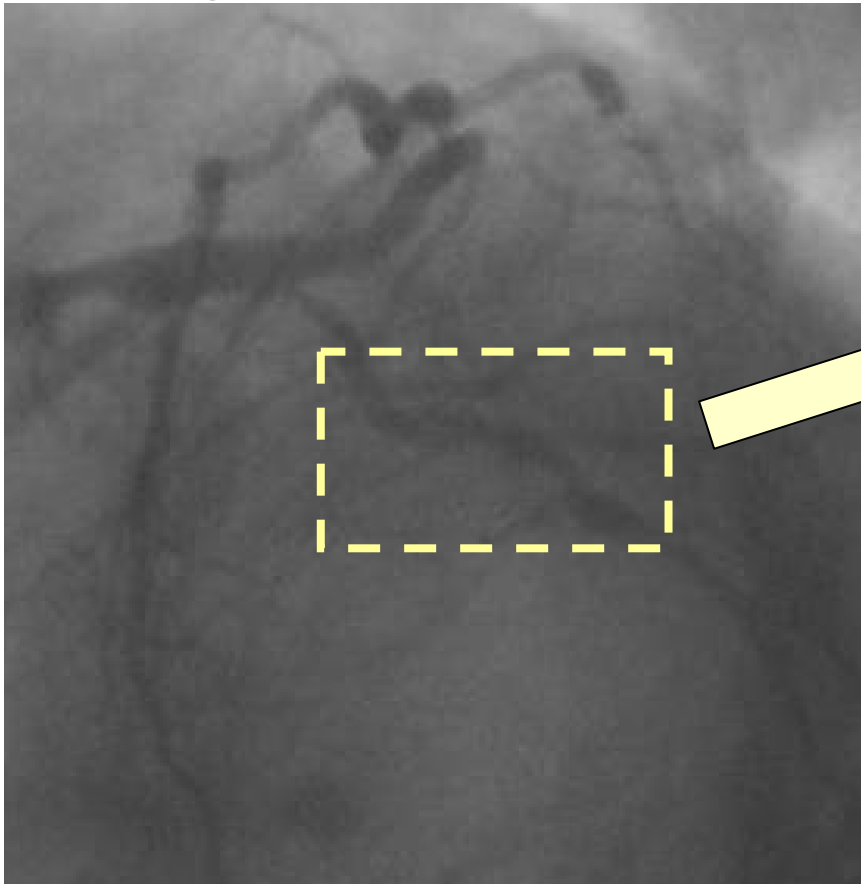
Stent Taxus Liberté 2.25x24mm

Historia clínica

Paciente varón
FN: 02-02-1955

Abril 2008. Angioplastia Multivaso

Angioplastia sobre CX

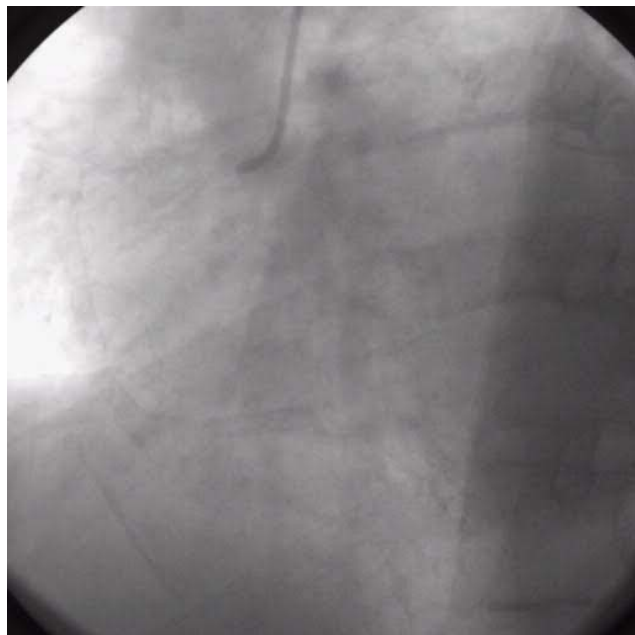


Stent Taxus Liberté 2.25x24mm

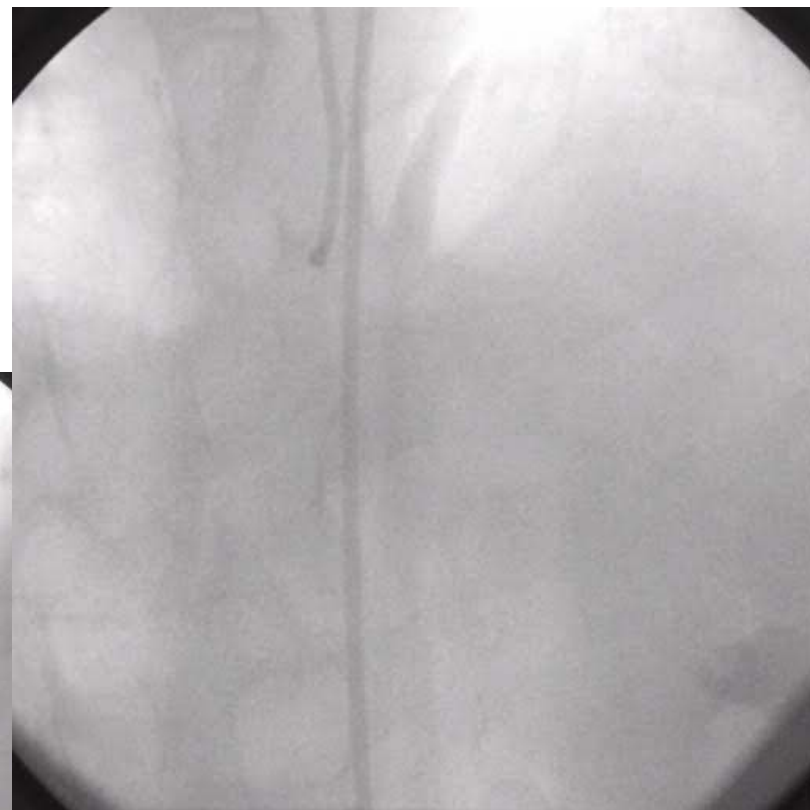
Historia clínica

Paciente varón
FN: 02-02-1955

Abril 2008. Angioplastia Multivaso



Angioplastia sobre PL



Stent Taxus Liberté 2.25x12 mm

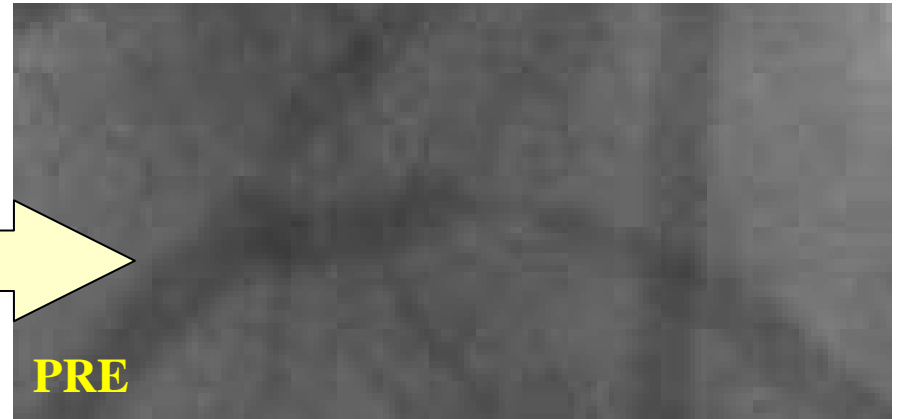
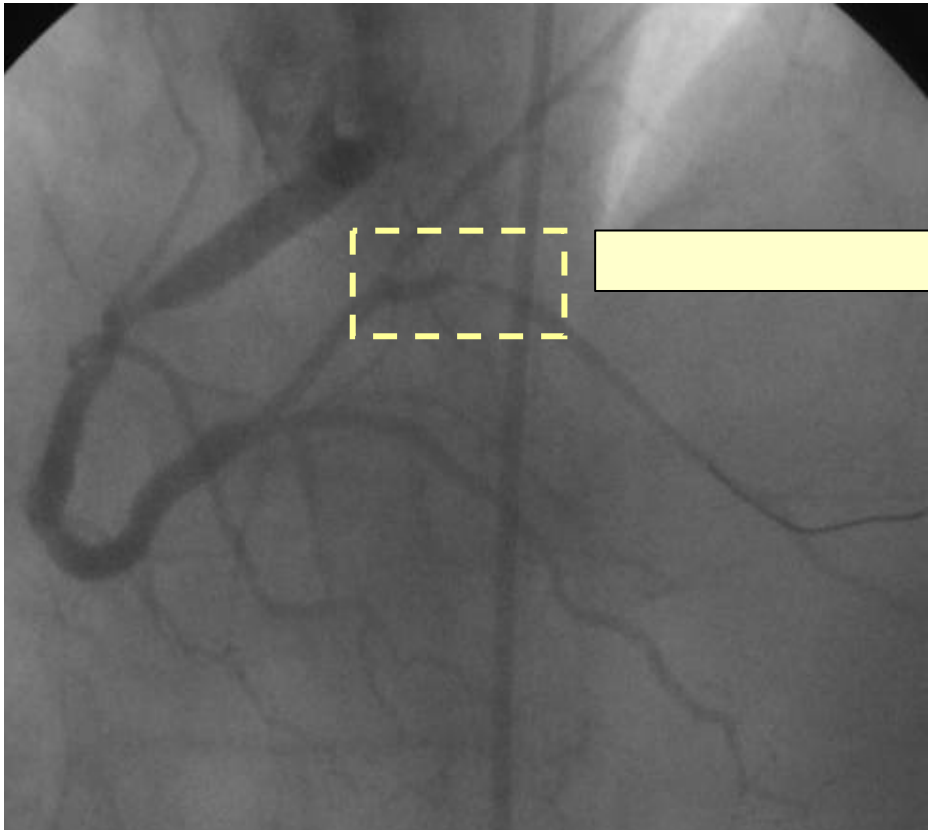
Historia clínica

Paciente varón
FN: 02-02-1955

Abril 2008. Angioplastia Multivaso

PL pre y pot y sus stents

Angioplastia sobre PL



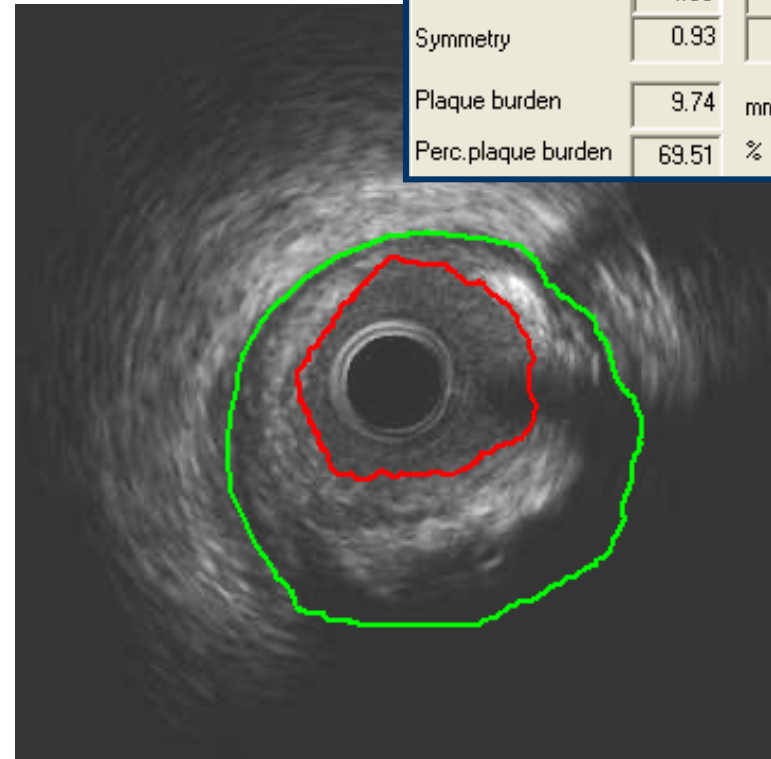
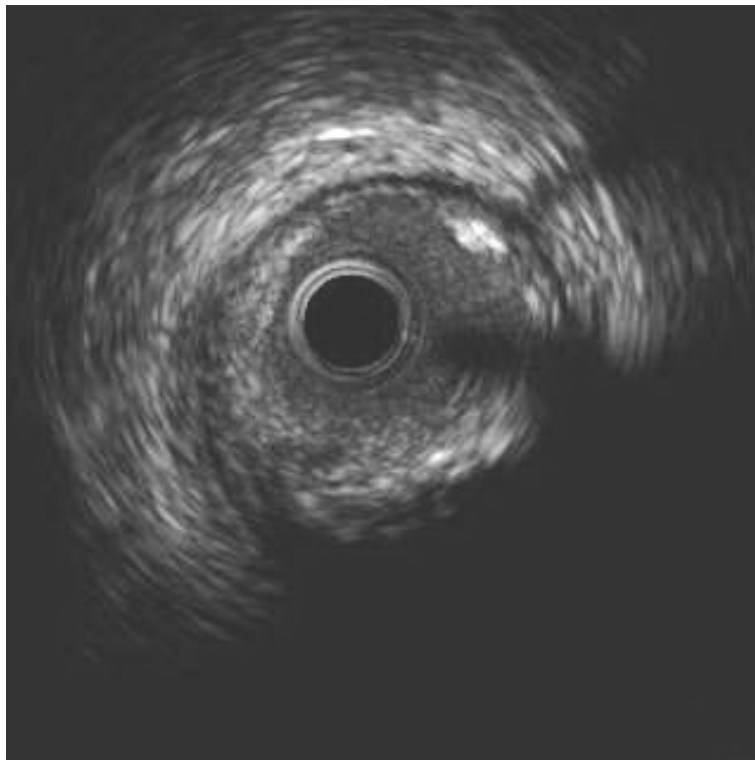
Stent Taxus Liberté 2.25x12 mm

Historia clínica

Paciente varón
FN: 02-02-1955

Abril 2008. Angioplastia Multivaso

Estudio morfológico de CDM



	Vessel	Lumen
Area	14.02	4.27
Average diameter	4.22	2.33
Largest diameter	4.36	2.49
Smallest diameter	4.08	2.09
Symmetry	0.93	0.84
Plaque burden	9.74	mm ²
Perc.plaque burden	69.51	%

Historia clínica

Paciente varón
FN: 02-02-1955

Abril 2008

Tratamiento al alta

** Medidas dietéticas y consejo para abandono tabaco*

* AAS 100 mg

* Clopidogrel 75 mg ¿1 año? ¿indefinido?

* Carvedilol 25: 1 comp cada 12 horas

* Ramipril 10 mg/24h

* Mononitrato de isosorbide liberación prolongada: 50mg/24h

* Amlodipino 10 mg/24h

* Atorvastatina 80 mg/24h

* Metformina 850 Mg/12h

Historia clínica

Paciente varón
FN: 02-02-1955

Abril 2008

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MUCHAS GRACIAS

Standards of Medical Care in Diabetes—2008

DIABETES CARE, VOLUME 31, SUPPLEMENT 1, JANUARY 2008

C. Diagnosis of pre-diabetes

Hyperglycemia not sufficient to meet the diagnostic criteria for diabetes is categorized as either IFG or impaired glucose tolerance (IGT), depending on whether it is identified through the FPG or the OGTT:

- IFG = FPG 100 mg/dl (5.6 mmol/l) to 125 mg/dl (6.9 mmol/l)
- IGT = 2-h plasma glucose 140 mg/dl (7.8 mmol/l) to 199 mg/dl (11.0 mmol/l)

Table 2—Criteria for the diagnosis of diabetes

1.	FPG \geq 126 mg/dl (7.0 mmol/l). Fasting is defined as no caloric intake for at least 8 h.*
	OR
2.	Symptoms of hyperglycemia and a casual plasma glucose \geq 200 mg/dl (11.1 mmol/l). Casual is defined as any time of day without regard to time since last meal. The classic symptoms of hyperglycemia include polyuria, polydipsia, and unexplained weight loss.
	OR
3.	2-h plasma glucose \geq 200 mg/dl (11.1 mmol/l) during an OGTT. The test should be performed as described by the World Health Organization, using a glucose load containing the equivalent of 75 g anhydrous glucose dissolved in water.*

*In the absence of unequivocal hyperglycemia, these criteria should be confirmed by repeat testing on a different day (5).

Standards of Medical Care in Diabetes—2008

DIABETES CARE, VOLUME 31, SUPPLEMENT 1, JANUARY 2008

II. TESTING FOR PRE-DIABETES AND DIABETES IN ASYMPTOMATIC PATIENTS

Recommendations

- Testing to detect pre-diabetes and type 2 diabetes in asymptomatic people should be considered in adults who are overweight or obese ($\text{BMI} \geq 25 \text{ kg/m}^2$) and who have one or more additional risk factors for diabetes (Table 3). In those without these risk factors, testing should begin at age 45. (B)
- If tests are normal, repeat testing should be carried out at least at 3-year intervals. (E)
- To test for pre-diabetes or diabetes, either an FPG test or a 2-h OGTT (75-g glucose load) or both are appropriate. (B)
- An OGTT may be considered in patients with IFG to better define the risk of diabetes. (E)
- In those identified with pre-diabetes, identify and, if appropriate, treat other CVD risk factors. (B)

Standards of Medical Care in Diabetes—2008

DIABETES CARE, VOLUME 31, SUPPLEMENT 1, JANUARY 2008

IV. PREVENTION/DELAY OF TYPE 2 DIABETES

Recommendations

- Patients with IGT (A) or IFG (E) should be given counseling on weight loss of 5–10% of body weight, as well as on increasing physical activity to at least 150 min/week of moderate activity such as walking.
- Follow-up counseling appears to be important for success. (B)
- Based on potential cost savings of diabetes prevention, such counseling should be covered by third-party payors. (E)
- In addition to lifestyle counseling, metformin may be considered in those who are at very high risk (combined IFG and IGT plus other risk factors) and who are obese and under 60 years of age. (E)
- Monitoring for the development of diabetes in those with pre-diabetes should be performed every year. (E)

Guidelines DM 2007, pag17 de 72

Guidelines DM 2007, pag22 de 72 (Sd Metabólico)

Guidelines ES 2006 ESC pag 7 de 41

ACC/AHA PRACTICE GUIDELINES—FULL TEXT

ACC/AHA 2004 Guideline Update for Coronary Artery Bypass Graft Surgery

A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Update the 1999 Guidelines for Coronary Artery Bypass Graft Surgery)

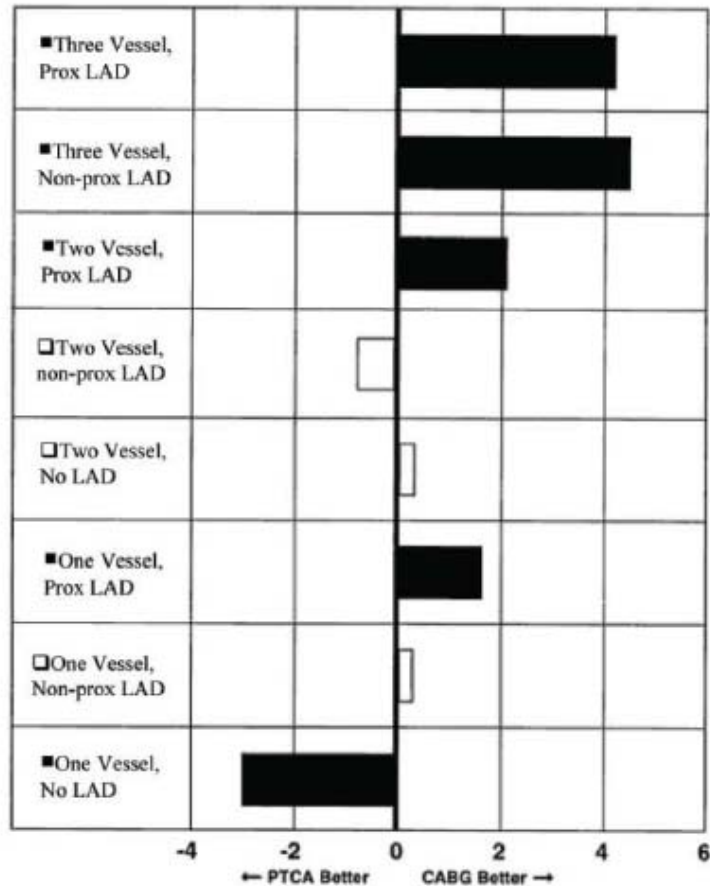
Developed in Collaboration With the American Association for Thoracic Surgery and the Society of Thoracic Surgeons

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Panel B

Figure 7. Panel A: 95% Confidence interval for \ln (adjusted hazard ratio) of PTCA patient death: CABG patient death within a 3-year period (excluding patients with myocardial infarction less than 24 hours before the procedure). For the sample size within each anatomical cohort, see Table 11. **Panel B:** Differences in adjusted percent survival at 3 years: percent CABG survival minus percent PTCA survival. Solid bars show statistically significant differences. Prox indicates proximal; LAD, left anterior descending coronary artery; PTCA, percutaneous coronary angioplasty; CABG, coronary artery bypass graft. Reprinted with permission from Elsevier Science, Inc. (Hannan et al. J Am Coll Cardiol. 1999;33:63-72) (150).

Table 12. Three-Year Survival by Treatment in Each Anatomic Subgroup

Coronary Anatomy Group		Patients, n	Survival		P
			Observed, %	Adjusted, %	
1-Vessel, no LAD	CABG	507	89.2	92.4	0.003
	PTCA	11,233	95.4	95.3	
1-Vessel, nonproximal LAD	CABG	153	95.8	96.0	0.857
	PTCA	4130	95.7	95.7	
1-Vessel, proximal LAD	CABG	1917	95.8	96.6	0.010
	PTCA	5868	95.5	95.2	
2-Vessel, no LAD	CABG	1120	91.0	93.0	0.664
	PTCA	2729	93.4	92.6	
2-Vessel, nonproximal LAD	CABG	850	91.3	92.3	0.438
	PTCA	2300	93.3	93.1	
2-Vessel, proximal LAD	CABG	7242	93.5	93.8	<0.001
	PTCA	2376	92.8	91.7	
3-Vessel, nonproximal LAD	CABG	1984	90.1	90.3	0.002
	PTCA	660	86.7	86.0	
3-Vessel, proximal LAD	CABG	15,873	90.1	90.3	<0.001
	PTCA	634	88.2	86.1	

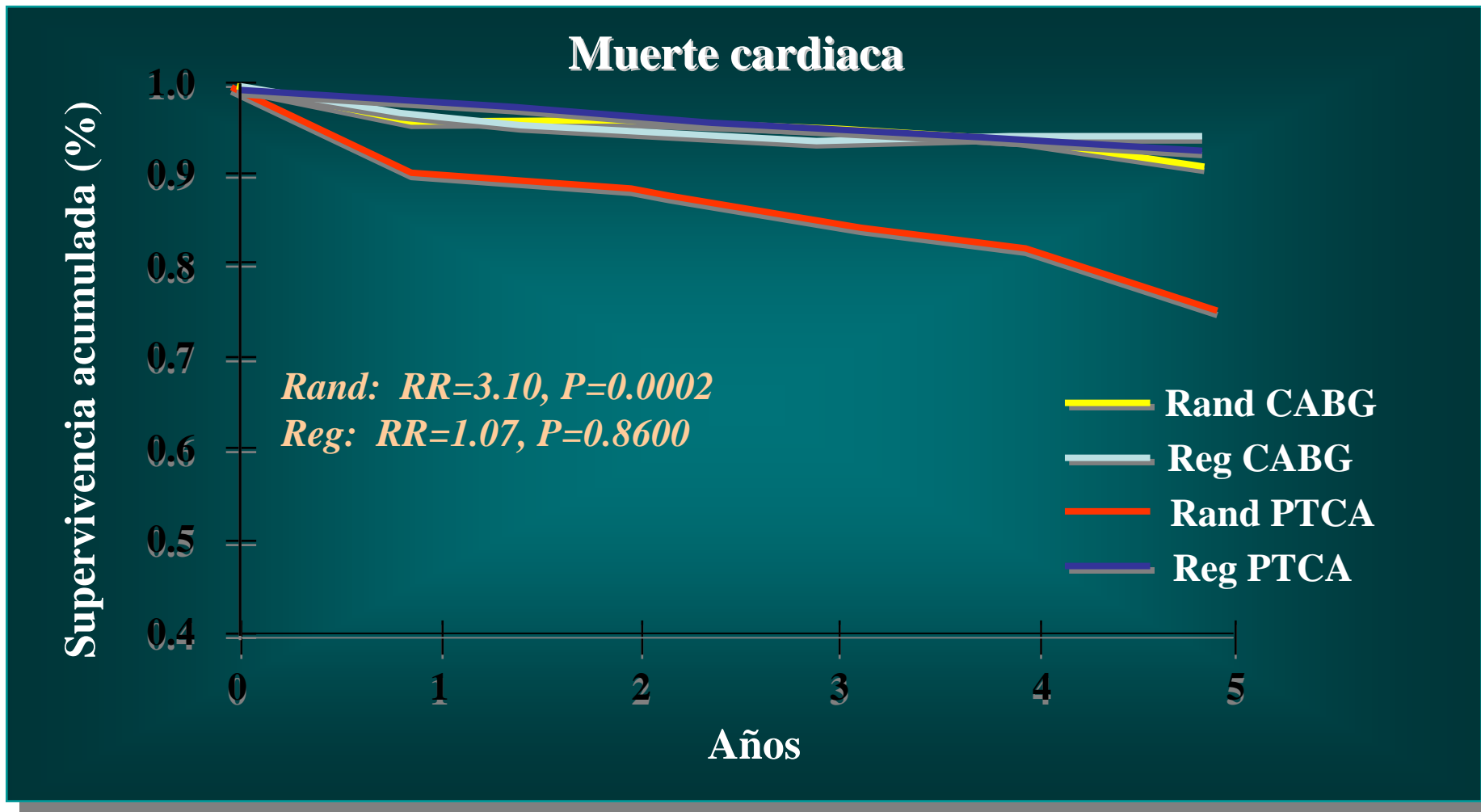
LAD indicates left anterior descending coronary artery; CABG, coronary artery bypass graft; and PTCA, percutaneous transluminal coronary angioplasty.

Comparative observed and adjusted 3-year survival of patients treated with PTCA or CABG in various anatomic subgroups.

Reprinted with permission from Elsevier Science, Inc. (Hannan et al. J Am Coll Cardiol. 1999;33:63-72) (150).

BARI – Resultados 5 años en diabéticos

Pacientes aleatorizados y registro



Enfermedad Multivaso- CABG frente ACP stent

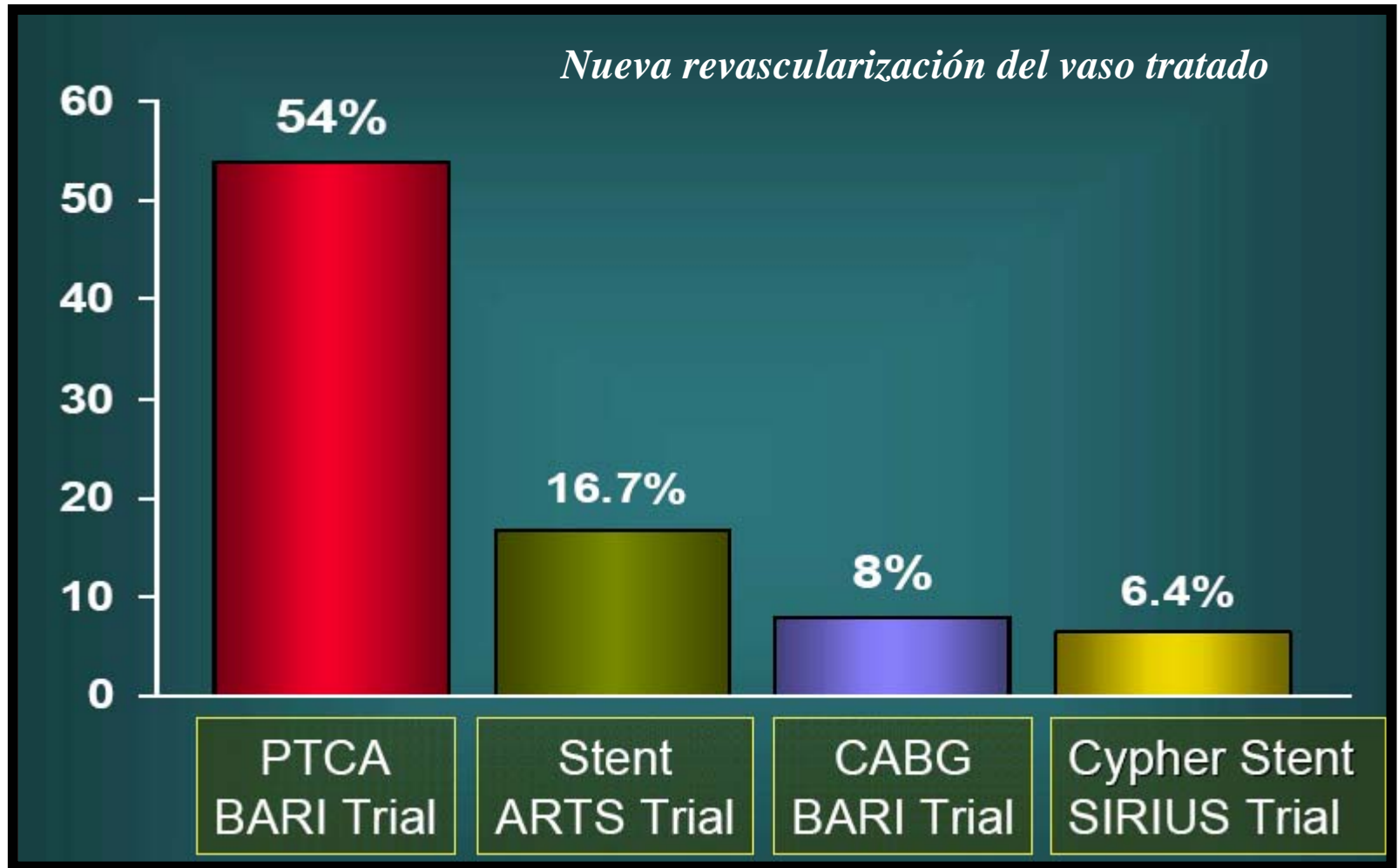
Estudio ARTS 1 año

	DIABETES			NO DIABETES		
	Stent n = 112	CABG n = 96	P	Stent n = 488	CABG n = 509	P
Muerte, n (%)	7 (6.3)	3 (3.1)	0.294	8 (1.6)	14 (2.8)	0.412
Accidente cerebrovasc, n (%)	2 (1.8)	6 (6.3)	0.096	7 (1.4)	6 (1.2)	0.722
IAM, n (%)	7 (6.3)	3 (3.1)	0.294	25 (5.1)	21 (4.1)	0.453
Nueva Revasculariz						
CABG, n (%)	9 (8.0)	0	< 0.001	19 (3.9)	3 (0.6)	< 0.001
PTCA, n (%)	16 (14.3)	3 (3.1)	< 0.001	57 (11.7)	15 (2.9)	< 0.001
Libre MACE, n (%)	71 (63.4)	81 (84.4)	< 0.001	372 (76.2)	450 (88.4)	< 0.001

Abizaid et al. Circ 2001;104:533-538.

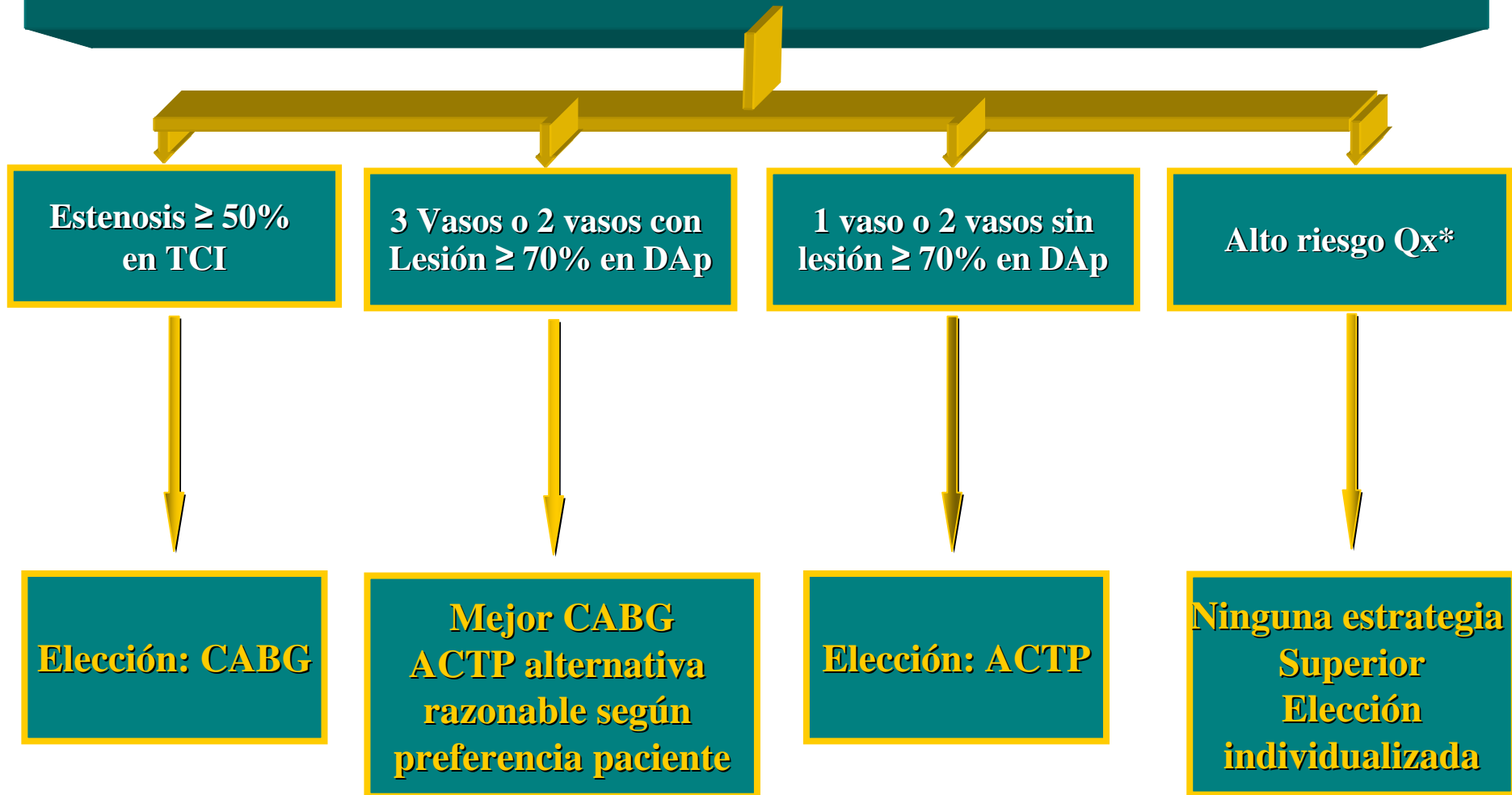
Legrand VM et al. Circulation 2004;109:1114-1120

Enfermedad Multivaso- CABG frente ACTP



Revascularización coronaria electiva

Paciente diabético con indicación de revascularización coronaria



Guidelines for Percutaneous Coronary Interventions

The Task Force for Percutaneous Coronary Interventions of the European Society of Cardiology

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Online publish-ahead-of-print 15 March 2005

Guidelines for Percutaneous Coronary Interventions

The Task Force for Percutaneous Coronary Interventions of the European Society of Cardiology

Table 1 Recommendations of PCI indications in stable CAD

Indication	Classes of recommendations and levels of evidence	Randomized studies for levels A or B
Objective large ischaemia	I A	ACME ^a ACIP ^b
Chronic total occlusion	IIa C	—
High surgical risk, including LV-EF < 35%	IIa B	AWESOME
Multi-vessel disease/diabetics	IIb C	—
Unprotected LM in the absence of other revascularization options	IIb C	—
Routine stenting of <i>de novo</i> lesions in native coronary arteries	I A	BENESTENT-I STRESS
Routine stenting of <i>de novo</i> lesions in venous bypass grafts	I A	SAVED VENESTENT

Assuming that the lesions considered most significant are technically suited for dilatation and stenting, the levels of recommendation refer to the use of stainless steel stents.

^aThe benefit was limited to symptom improvement and exercise capacity.

^bACIP is not a pure trial of PCI vs. medical treatment as half of the revascularization patients were treated with bypass graft surgery. Drug-eluting stents are discussed subsequently.

Guidelines for Percutaneous Coronary Interventions

The Task Force for Percutaneous Coronary Interventions of the European Society of Cardiology

Table 19 Recommendations for the use of DES in *de novo* lesions of native coronary arteries

DES	Indication	Classes of recommendations and levels of evidence	Randomized studies for levels A or B
Cypher stent	<i>De novo</i> lesions in native vessels according to the inclusion criteria	I B	SIRIUS
Taxus stent	<i>De novo</i> lesions in native vessels according to the inclusion criteria	I B	TAXUS-IV
Taxus stent	<i>De novo</i> long lesions in native vessels according to the inclusion criteria	I B	TAXUS-VI

There are only three positive controlled, randomized, adequately powered trials with a primary clinical endpoint at an appropriate time interval. Main clinical inclusion criteria for SIRIUS, TAXUS-IV, and TAXUS-VI were similar: stable or unstable angina or documented ischaemia. The stenoses had to be in native vessels >50 <100%. In SIRIUS, reference diameter and lesion length for inclusion were 2.5–3.5 mm and 15–30 mm, respectively. The reference diameter in TAXUS-IV and TAXUS-VI was 2.5–3.75 mm. In TAXUS-IV, the lesion length was 10–28 mm and in TAXUS-VI 18–40 mm. The main common exclusion criteria were acute MI or status post MI with elevated CK/CK-MB, bifurcational or ostial lesions, unprotected left main, visible thrombus, severe tortuosity, and/or calcification.



