

Flujo Fraccional de Reserva Coronario

Dr. Alejandro Palacios

FFR

- Conflicto de Interés: Ninguno

Decir lo que sentimos

Y

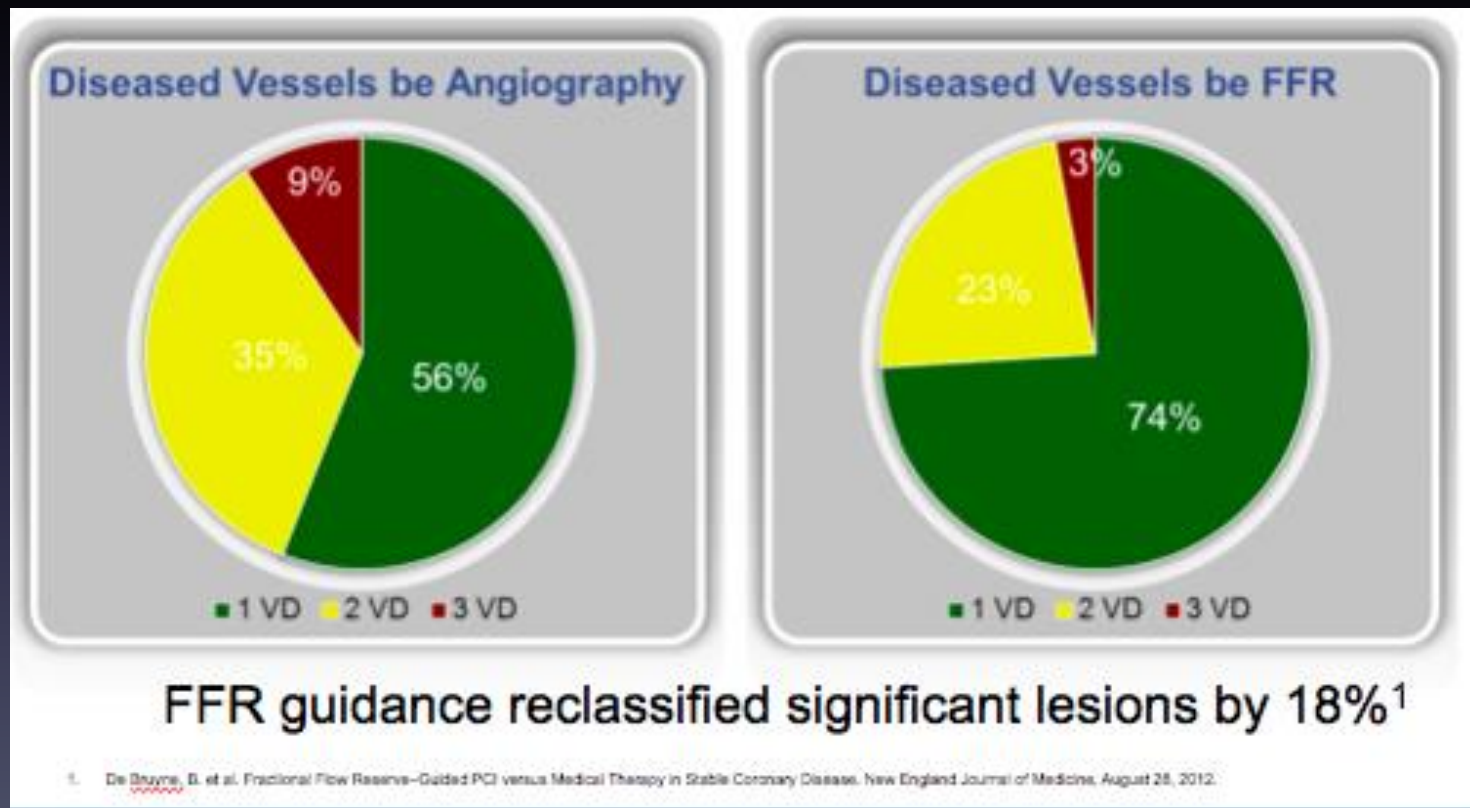
Sentir lo que decimos

Seneca

(2000 años atrás)

FAME 2

Reclasificación de las lesiones



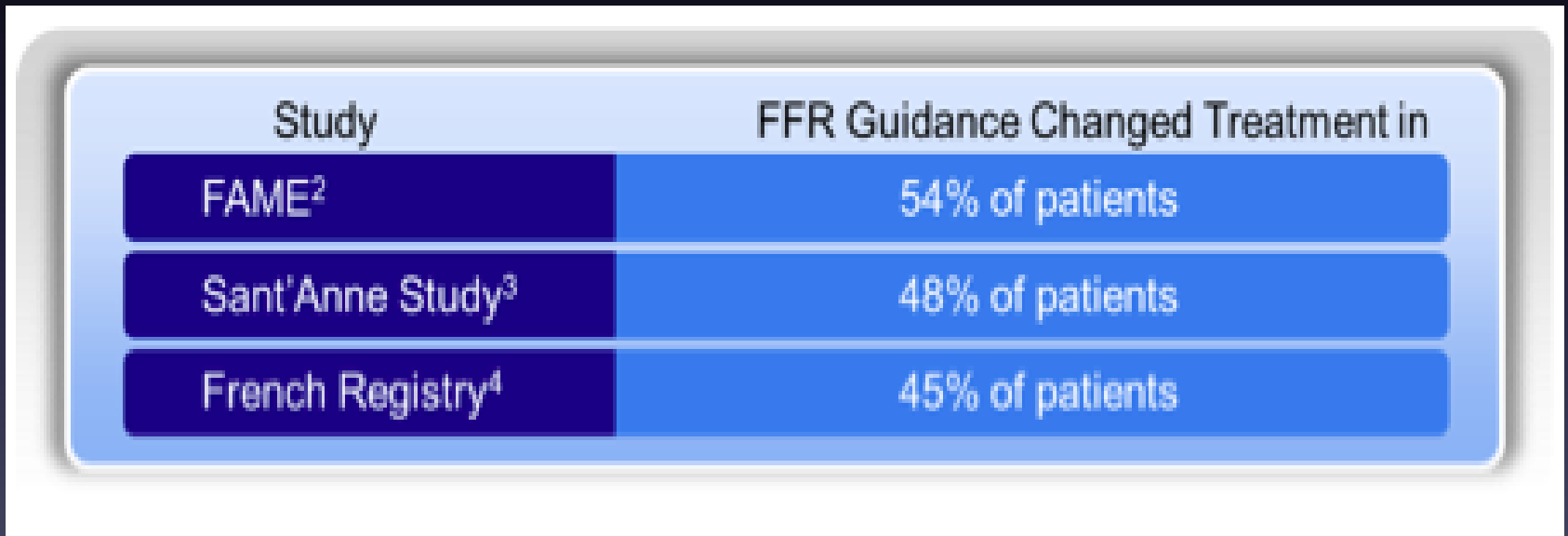
Cambio de Tratamiento con FFR

Angioplastia guiada por FFR :

27% de los ptes did NO tenían lesiones isquemicas

La mayoría con enfermedad de 1 vaso

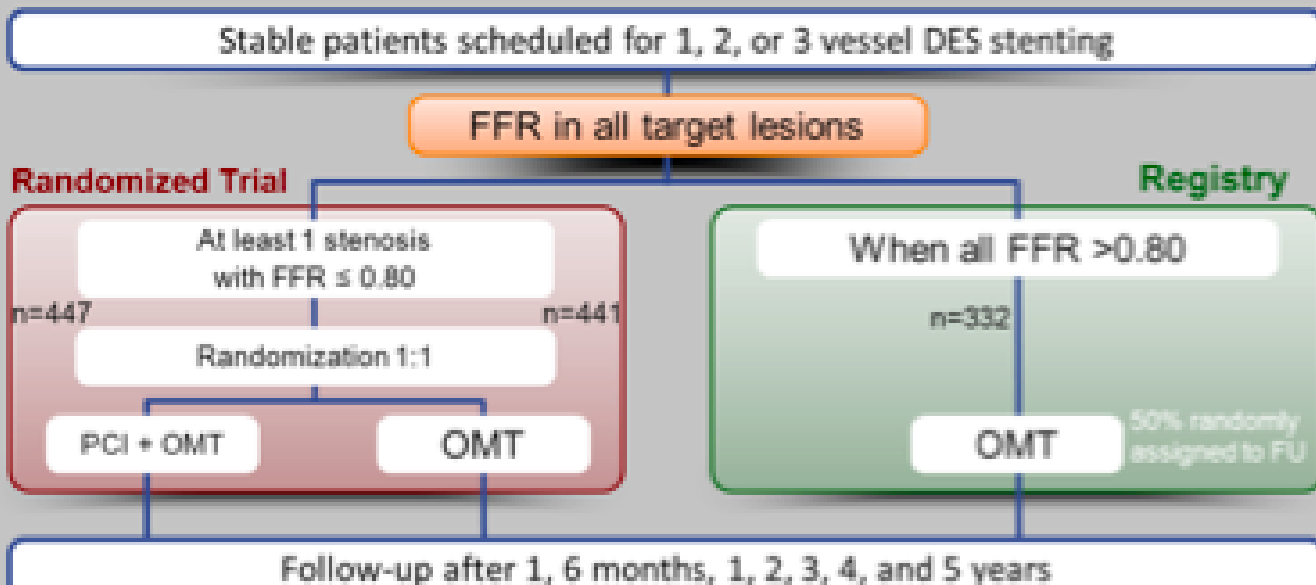
Pocos ptes con enfermedad funcional de 3 vasos



1. De Bruyne, B. et al. Fractional Flow Reserve–Guided PCI versus Medical Therapy in Stable Coronary Disease. New England Journal of Medicine, August 28, 2012.
2. Tonino PA, et al. Angiographic Versus Functional Severity of Coronary Artery Stenoses in the FAME Study . J Am Coll Cardiol. 2010;55:2816-2821.
3. Sant'Anna et. al, Influence of Routine Assessment of FFR on Decision Making During Coronary Interventions. Am J Cardiology 2007;99:504-508
4. Val Belle, E., et. al. Impact of the use of FFR on the coronary revascularization strategy: insights from a large French multicenter FFR registry). Archives of Cardiovascular Diseases Supplements (2011) 3, 1-25 (abstract)

FAME 2 Trial Structure

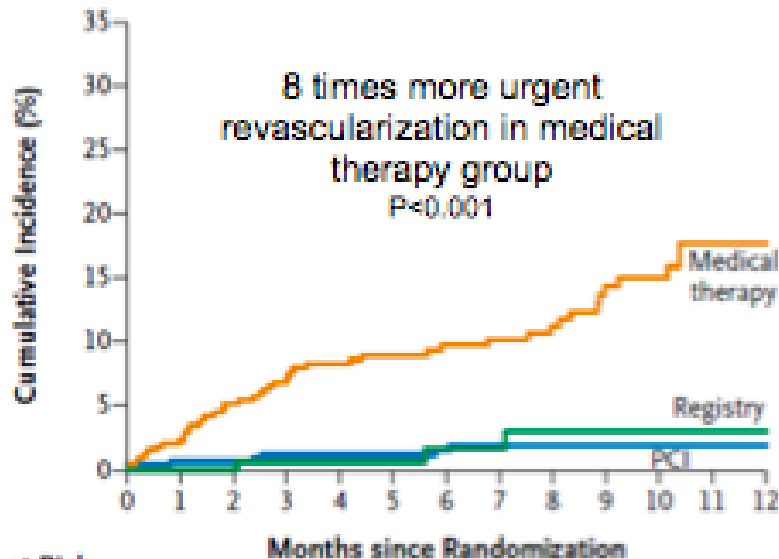
FAME 2 showed functional PCI can improve patient outcomes¹



1. De Bruyne, B. et al. Fractional Flow Reserve–Guided PCI versus Medical Therapy in Stable Coronary Disease. *New England Journal of Medicine*, August 28, 2012.

FAME 2

D Urgent Revascularization¹



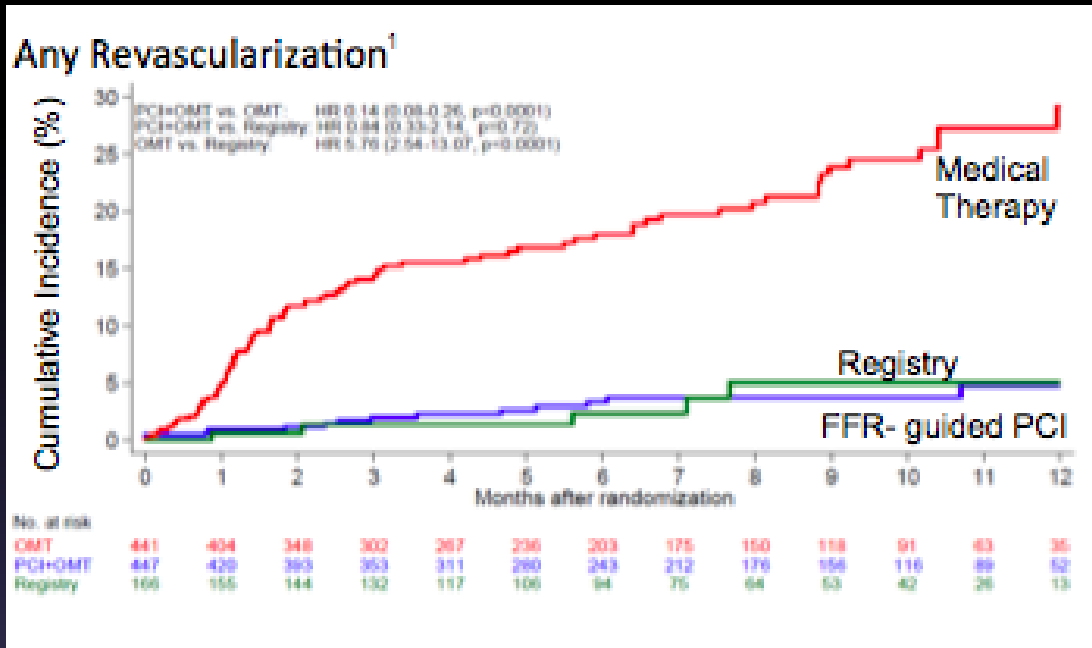
No. at Risk

Medical therapy	441	414	371	325	286	256	223	195	164	129	101	71	38
PCI	447	421	395	356	315	285	248	217	180	160	119	93	53
Registry	166	156	145	133	117	106	94	75	65	53	42	26	13

Reducción de revascularización urgente en la rama de ATC guiada por FFR.

Revascularización urgente es considerada un evento importante e impacta en la necesidad de reinternación

FAME 2



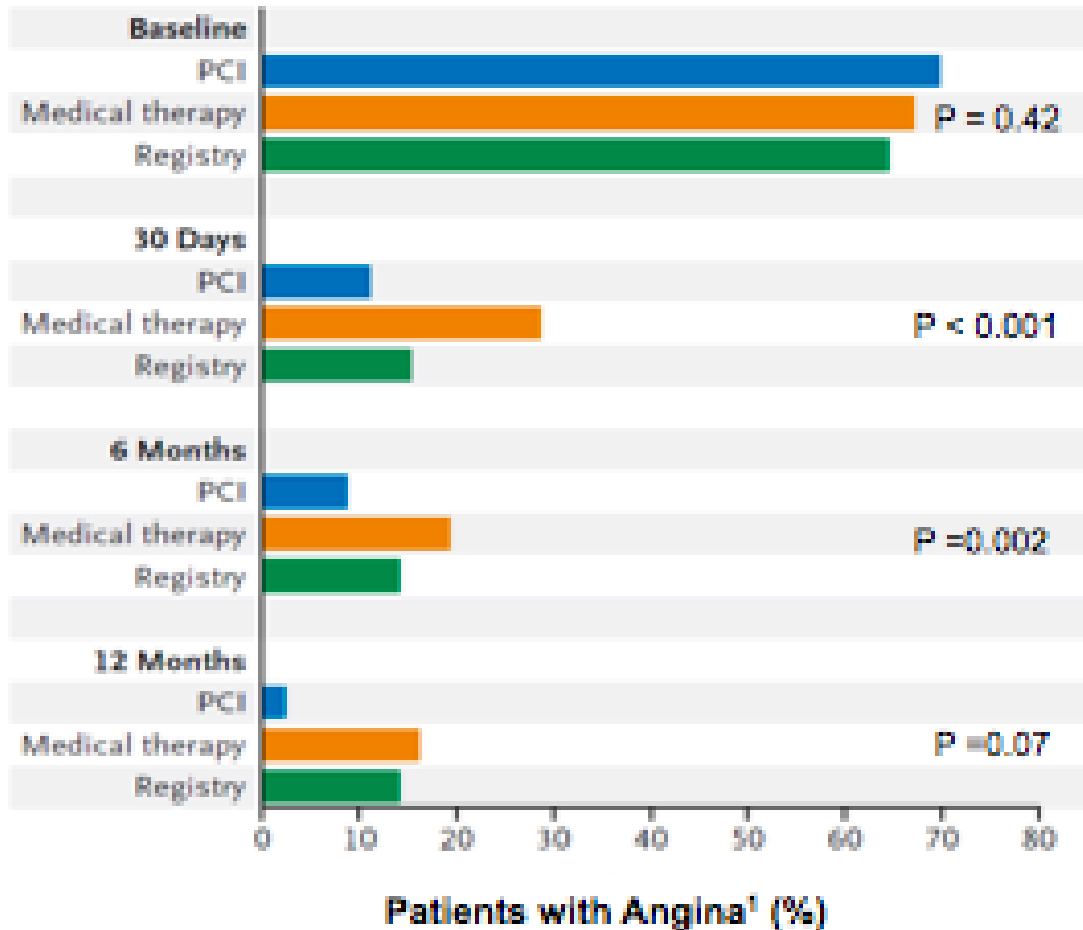
Revascularización en ATC guiada, fue de al menos 1/3 de los pacientes del grupo de trat. Medico a 12 meses.

(seg medio 123 dias) .

FFR identifica ptes. Que se benefician con ATC

1. De Bruyne, B. et al. Fractional Flow Reserve–Guided PCI versus Medical Therapy in Stable Coronary Disease, Supplementary Appendix. New England Journal of Medicine, August 28, 2012.

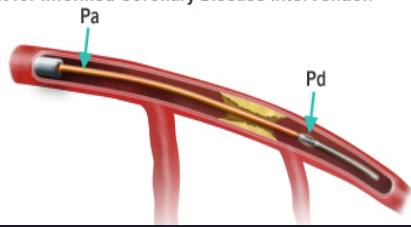
FAME 2



ATC guiada con FFR
povee importante
reducción de ANGINA

1. De Bruyne, B. et al. Fractional Flow Reserve–Guided PCI versus Medical Therapy in Stable Coronary Disease, Supplementary Appendix. New England Journal of Medicine, August 28, 2012.

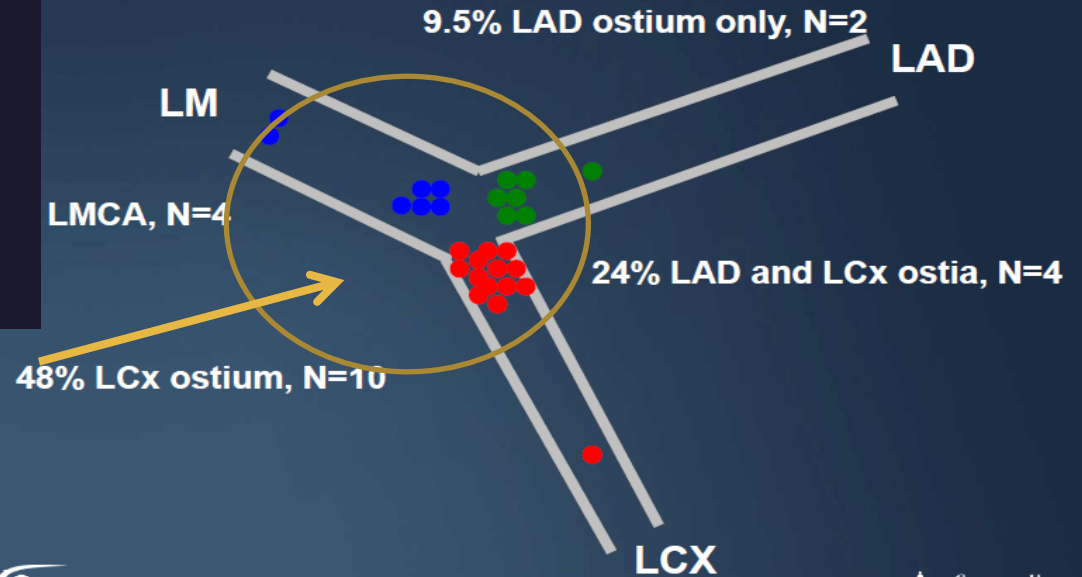
$$FFR = \frac{\text{Distal Coronary Pressure (Pd)}}{\text{Proximal Coronary Pressure (Pa)}} \\ \text{(During Maximum Hyperemia)}$$



Koo BK JACC 2005-46:633-637
 97 lesiones consecutivas, 2mm SB
 Ninguna lesión <75% tuvo FFR anormal
 73 lesiones >75% solo 20 tuvieron FFR anormal
 SB >2,5mm solo el 38% tuvo FFR anormal

LM Registry – SCRIPPS Clinic, N=50

42% Restenosis rate, 85% focal



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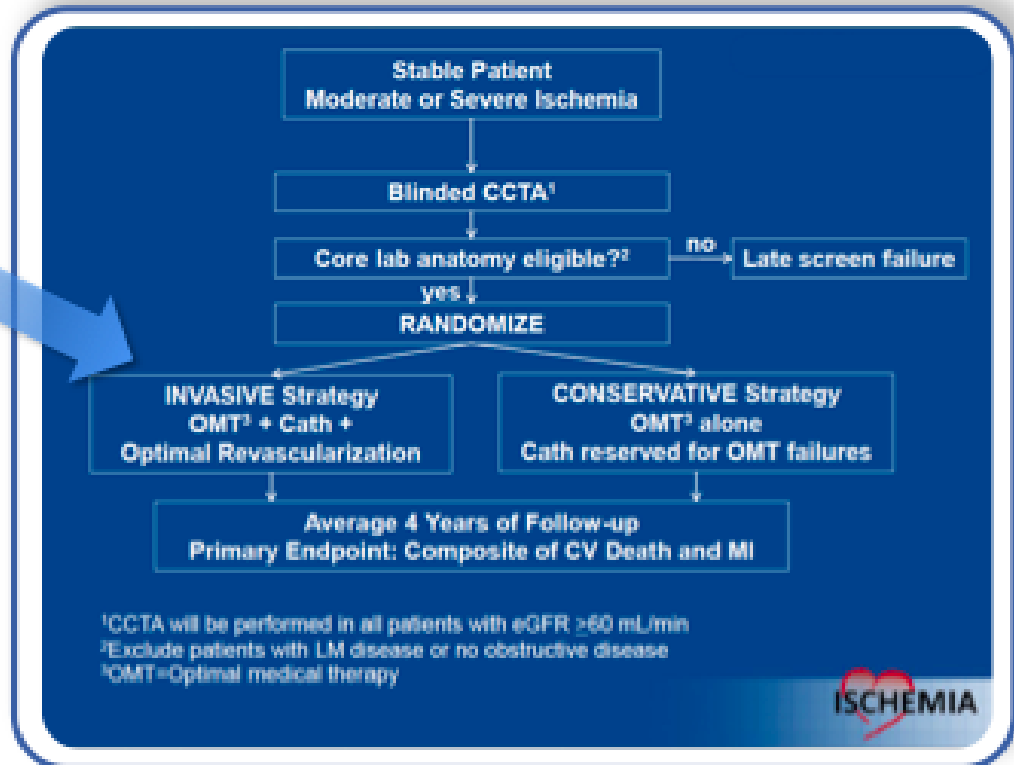
	PV	SB	p
Stent Min CSA mm ²	65±1,7	3,9±1,0	<0.0001
Expansión stent %	92,1±16,6	79,9±12,3	0,02
Stent CSA <4mm ²	10% (2/20)	55% (11/20)	0,007
Stent CSA <5mm ²	20%(4/20)	90%(18/20)	<0,0001

Costa R et al JACC 2006;46:599-605

ISCHEMIA Trial

Prestige® PLUS
Pressure guide wire

with
AcuSense™
Technology



8,000 patient with stable ischemic heart disease 150 hospitals in 33 countries

https://www.ischemiatrial.org/for-physicians/ISCHEMIA_Distribution_Mini_Slideset_Final_for_Public_Access_Jan_25_2012_Final.pdf

Equipos Disponibles en Argentina

TORRE IVUS & FFR

PORTATIL

Volcano s5/s5i Imaging System with IVUS & FFR

s5i Processing and Data Storage

Operating System	Windows® XP
Processor	Dual Intel XEON Processor 2.8 GHz
Memory	2 GB RAM
Hard Drive Capacity	2 x 250 GB Hard Drives
Digital Archiving Options	- Local Hard Disk: 20 Cases - DVD - 4.7 GB - DICOM Network
DICOM Services Supported	- DICOM Worklist Management - DICOM Store

s5i Power Requirements

Systems Input	- 100-120V, 50/60Hz - 220-240V, 50/60Hz - Maximum Rated Power 650W
Computer Workstation	- 100-240V, 50/60Hz, 250VA - Nominal power 250W
Monitor	- 100-240V, 50/60Hz, 250VA - Nominal power 64W
Isolation Transformer	Medical grade, 4kv dielectric withstand; 6 IEC 320 C14 isolated AC power outlets; 2 IEC 320 C13 isolated AC power input

s5i Specifications

	H x W x D		Weight	
	Inches	cm	lb	kg
CPU	16.5 x 6.75 x 21.25	39.6 x 16.2 x 51.0	35.0	15.0
Controller	5.0 x 15.0 x 10.0	12.0 x 38.0 x 24.0	6.6	3.0
Monitor	17.5 x 18.0 x 10.0	42.0 x 43.2 x 24.0	35.0	15.0
PIM	1.6 x 4.0 x 7.4	4.1 x 10.2 x 18.8	2.0	0.9

Ordering Information

s5i

s5i Integrated System Includes:	SSVC01, SSVC02
- CPU01 s5 CPU w/DVD Burner	
- CPU02 Power Transformer	
- CON01 Standard s5i Controller	
- CON04 Touchpad Option Kit	
- PIM01 Phased Array PIM Body	
- ARC04 DICOM Network Connection	
- IVUS03 ChemoFlow Functionality	
- MON01 Control Room Monitor Option	
- SSFR04 Option Kit	
Cable Pre-install Kit	CBLO1

s5 Tower

Volcano s5 Tower	SSTOW01, SSTOW02
Touchpad Option Kit	CON04
s5-FFR Option Kit	SSFR02

Manufactured by:
Volcano Corporation
2870 Kilgore Road
Rancho Cordova, CA 95670 USA
800-228-4728 916-638-8812 fax

Authorized European Representative:
Volcano Europe SA/NV
Exceliorlaan 41
B-1930 Zaventem Belgium
+32 2 679 1076 +32 2 679 1079 fax

For further information about VOLCANO and its products, please visit www.volcanocorp.com

600348/001/002



SmartMap® Pressure Instrument

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Simple Is Better

- Wire pressure sent to hemo system of choice
- Easy to use with plug-and-go set up
- Automatic wire zeroing and calibration

So Portable It Can Go Anywhere!

- Small size means convenient set up in any cath lab
- System so versatile it can be mounted on I.V. pole or bedside, or bagged in sterile field

Technical Specifications

Pressure Measurement Range	-30 to +330 mmHg
Pressure Band Width (@-3 db)	DC to 25 Hz
Pressure Measurement Delay Time	<40 ms
Measurement Accuracy	±3 mmHg (-30 to +100 mmHg) ±3% (>100 mmHg)
Analog Output	5µV/V/mmHg (adjustable between 4-6µV/V/mmHg)
Dimensions	15.75 cm W x 8.853 cm H x 4.48 cm D / 6.3" W x 3.54" H x 1.79" D
Weight	0.22 Kg or 220 grams / 0.45 pound



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