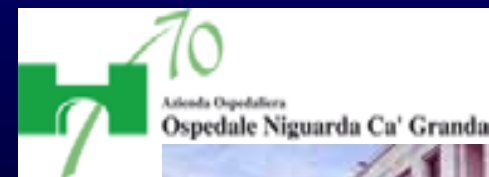




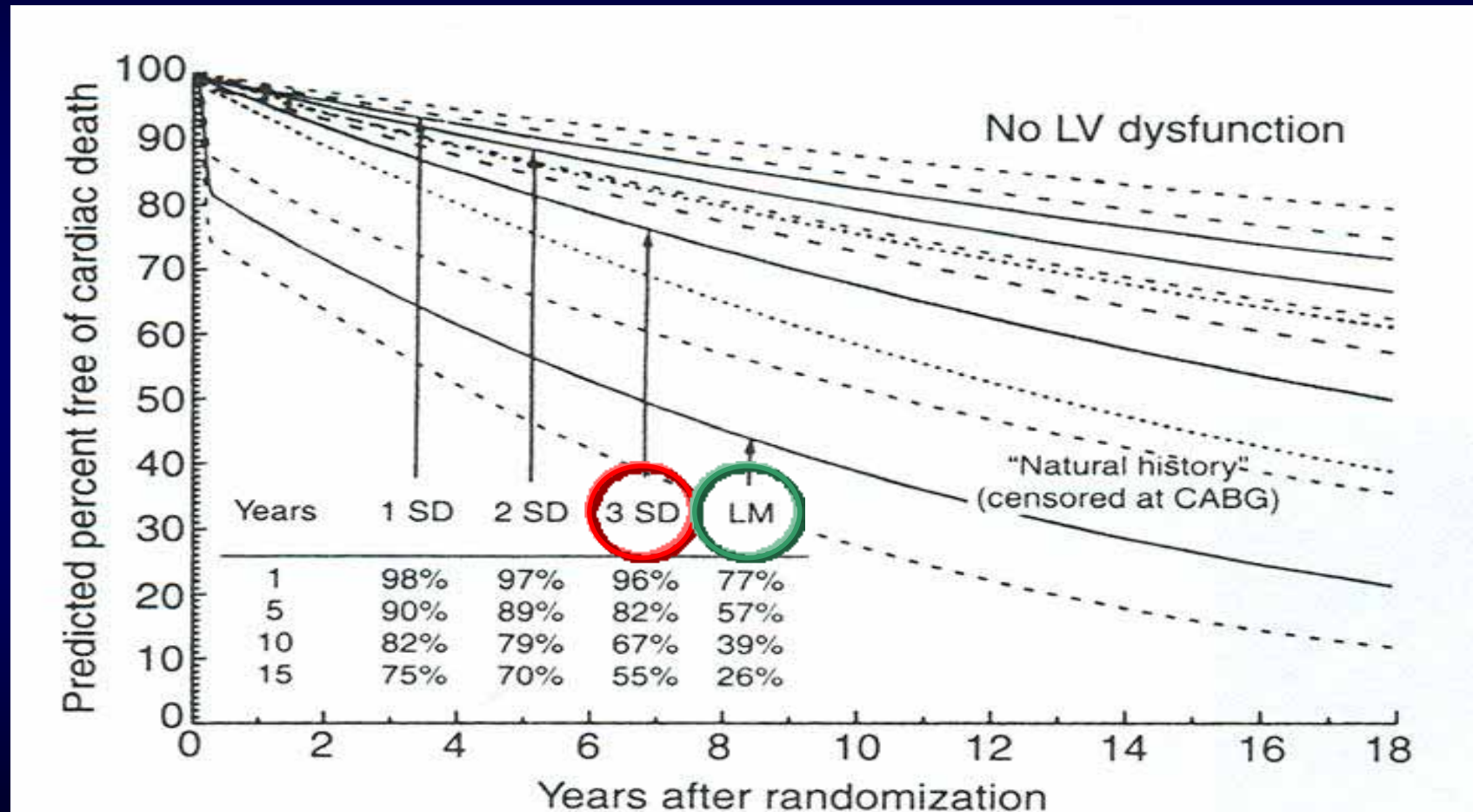
Stefano Pelenghi – La tecnica del BP aortocoronarico. Una tecnica storica, che per il successo della cardiologia interventistica, è ormai riservata ai casi più complessi. *Cosa è cambiato nella popolazione e nella tecnica; i punti critici che possono determinare complicanze, le maggiori difficoltà per il chirurgo, le soluzioni*



UO Cardiochirurgia "A. De Gasperis"
Azienda Ospedaliera Ospedale Niguarda Cà Granda



Coronaropatia **trivascolare** non letale a short term
 Coronaropatia **tronco comune** è letale a short term



ACC/AHA Joint Task Force on CABG JACC-Circulation 1991



Tecnica storica.....



1962 Sabiston: Ao → VGS riportato 1974

Redo, tea RCA 12 mesi prima, deceduto stroke III

1963 Kolessov: AMI Sx → IVA LAST-operation

Left anterior small Thoracotomy (LAST) off-CEC

Leningrad plenum: conclusion: CABG no futuro

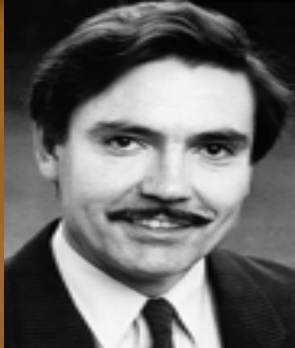
Kolessov VL, Operatsii na venechughk arteriiaxh serdtsa. Eksp Khir Anest 1965;10:3-8.

Mammary artery-coronary-artery anastomosis as a method of treatment for angina pectoris.

J Thorac Cardiovasc Surg 1967;54:535-44

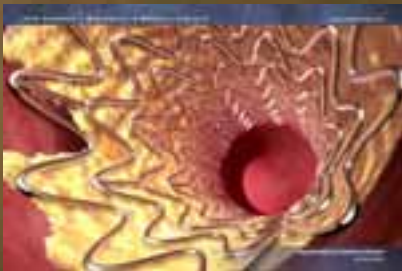


.....riservata ai casi più complessi



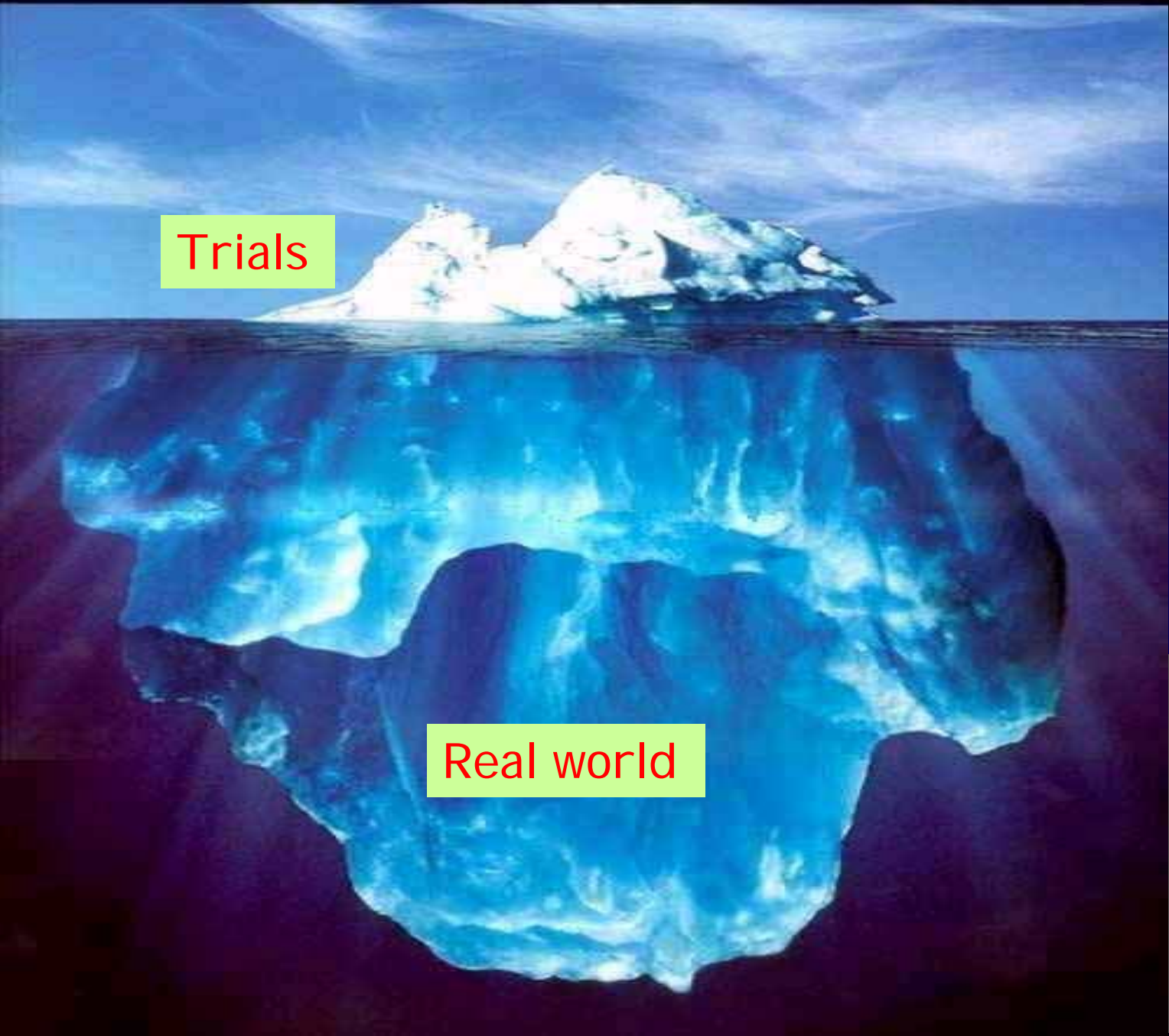
1977-1979 Andreas Gruentzig-

Apocalypse Now
REDUX



Dif
Dif
Paz

Trials



Yusuf S, L

2009.

Syn

Differen
Differen
Pazienti

97.3
95.6
78.1
27.6
18.9
14.1
2.6



Dati De Gasperis 7063 pz 1979-2009

	1979-80 300 pz	1991-92 514 pz	1994-2005 5181 pz	2006-2009 1068 pz
> 60 anni	14.0%	56.2%	66.7%	73.1%
Diabete NID	-	9.7%	18.4%	21.4%
Diabete ID	-	1.7%	4.1%	8.1%
Female	6.0%	9.7%	19.4%	17.1%
I Renale	-	8.0%	10.0%	8.6%
I MA pregr.	55.3%	59.3%	51.4%	45.3%
FE < 35%	4.7%	10.5%	17.3%	15.5%
I MA in atto	-	4.1%	5.9%	1.5%
3 vasi o TCCS	53.0%	66.4%	75.3%	58.2%
Emergenza	1.7%	11.9%	10.3%	4.1%
Emerg+ Urg	5.3%	27.2%	19.2%	11.5%



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Stratificazione rischio perioperatorio CABG 16120 consecutive pts

50% of pts operative risk = < 1%

75% of pts operative risk = < 2%

3% of pts operative risk = > 10%

1% of pts operative risk = > 20%



STS Cardiac Surgery database:
2.000.000 procedure in 600 hsp

Rischi correlati a CABG

Rischio mediastinite	0.50%
Rischio stroke permanente	1.50%
<u>Rischio morte</u>	<u>2.59%</u>
Rischio insufficienza renale	3.49%
Rischio intubazione prolungata	7.10%



Patologie

problema

strategia

Disfunzione VSx

vitalità

CCH 4.6% †

Diabete

lesioni diffuse

culprits
(CABG vs PCI)

Shock Cardiogeno

10% IMA 70-80% †

CCH 35%†



	Rivascolarizzati (PCI /CABG)	Medical
†30 gg	46.7%	56.0%
†6 mesi	50.3%	63.1 %



Tecnica

AMI Sx => IVA

Rivascolarizzazione arteriosa

Rivascolarizzazione completa.....ibrid-approach?

B-Bloccanti, ASA, statine

Off-CEC (shunt, no touch aorta)



Off-CEC

Sollevati molti dubbi sulla reale efficacia rispetto CEC nei Pazienti a basso rischio

Comprovati migliori benefici rispetto a on-CEC per Pz ad alto rischio:

disfunzione ventricolare sinistra

insufficienza renale

vasculopatia cerebrale

Molti chirurghi off-pump clampano aorta tangenzialmente

ECO aortico intraoperatorio

NO Touch Aorta Technique



24.107 pts

3000 on pump - 3000 off-pump

Propensity Case-Matched Analysis of Off-Pump Versus On-Pump Coronary Artery Bypass Grafting in Patients With Atheromatous Aorta

Manisha Mishra, MD, Rajneesh Malhotra, MCh, Anil Karlekar, MD, Yugal Mishra, MD, and Naresh Trehan, MD

Off-pump technique:
Preditore indipendente
di riduzione

stroke rate

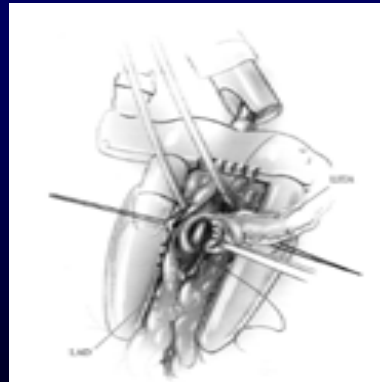
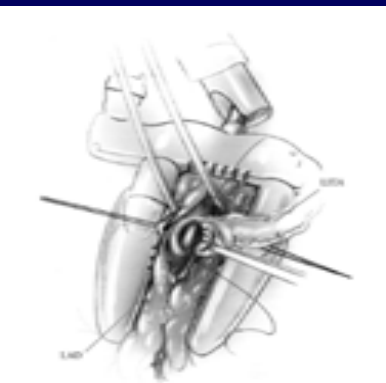
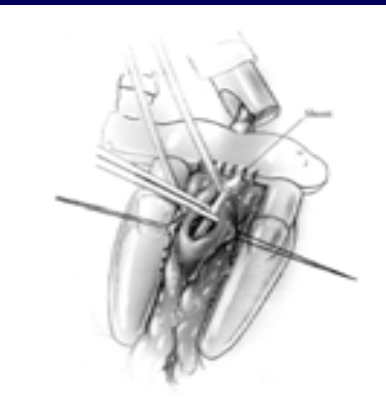
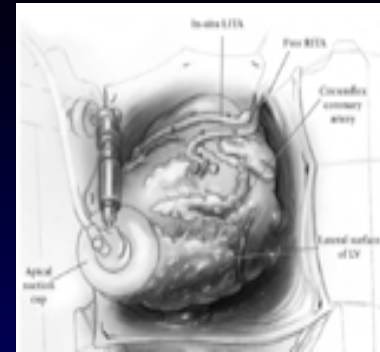
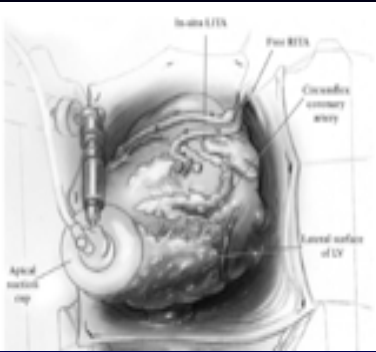
tive heart failure, chronic obstructive pulmonary disease, acute myocardial infarction, peripheral vascular disease, history of stroke or cerebrovascular disease, renal disease, carotid artery disease, atrial fibrillation, emergency surgery, or previous cardiac surgery.

Results. Univariate analysis revealed decreased hospi-

aorta is associated with lower risk of stroke and death. Routine intraoperative evaluation of the aorta is helpful in identifying the disease and directs the appropriate surgical technique.

(Ann Thorac Surg 2006;82:608-14)

© 2006 by The Society of Thoracic Surgeons



Punti critici

difficoltà

complicanze

Calcificazione ao asc.

cannulazione x CEC

Diss. Ao/Neu

clampaggio totale/tang

Diss. Ao/Neu

Carenza condotti

rivascolarizzazione incompleta

I schemia

Doppia mammaria

scheletrizzazione

Mediastinite

Reintervento

AMI sx=>I VA pervio

Rischio vs Beneficio?



IRC

Carenza condotti

Età

Malati piu complessi, a rischio operatorio maggiore
-rischio correlato al paziente-

Aorta calcifica

Diabete

Polivasculopatia

BPCO

Cannulazione alternativa x CEC

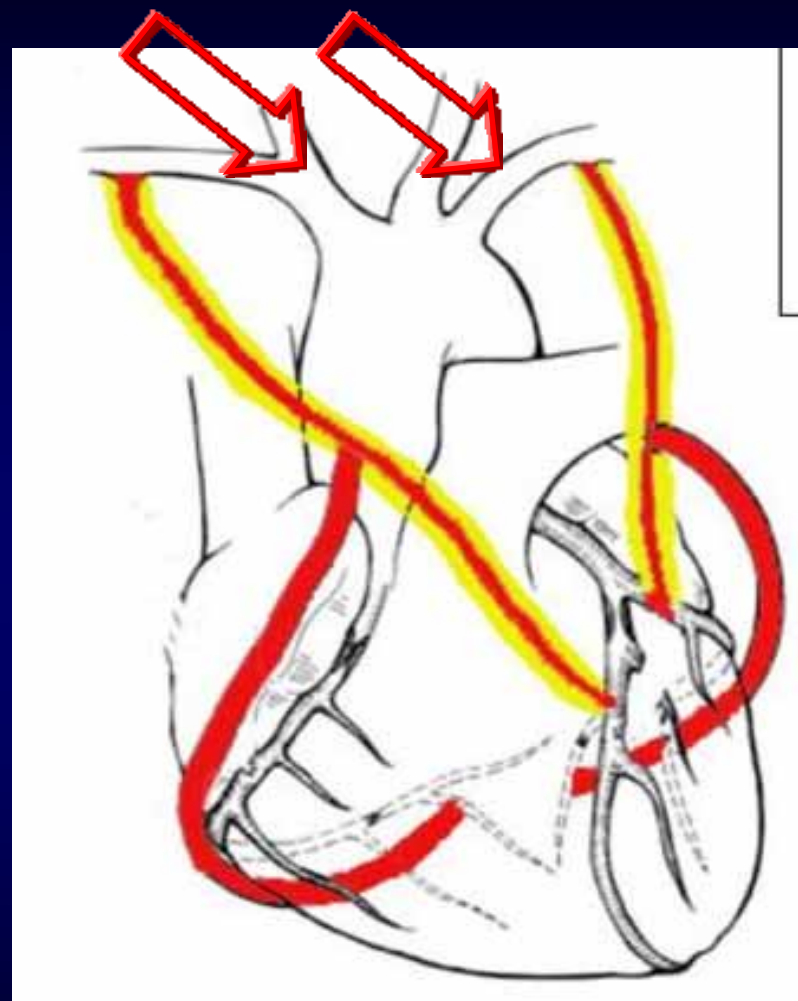
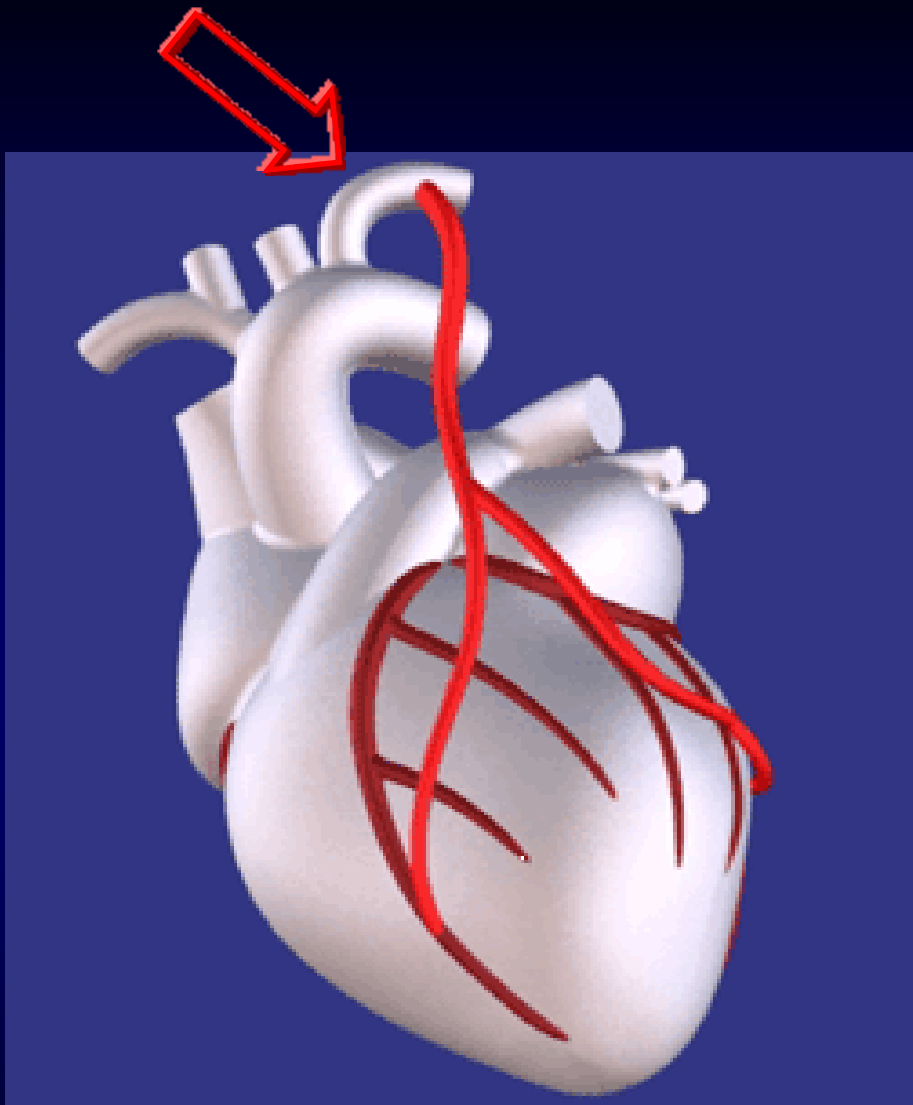
Pz necessitano tecniche più complesse ed a rischio maggiore
-rischio correlato alla procedura-

Emofiltrazione

Arteria radiale

Doppia mammaria scheletrizzata

Off-CEC



Studiare succlavie e mammarie !!



Soluzioni

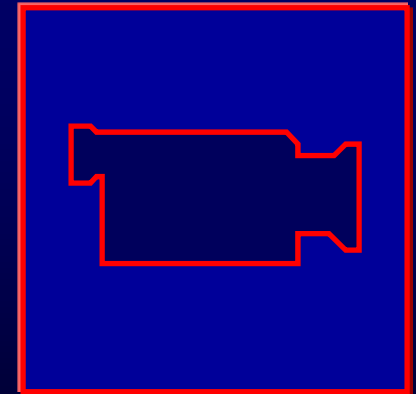
No Touch Aorta

Off-CEC

Totalmente Arteriosa

Mammarie scheletrizzate

Completa \pm Ibrida ??





Angelo De Gasperis



Soluzioni

No Touch Aorta

Off-CEC

Totalmente Arteriosa

Mammarie scheletrizzate

Completa \pm I brida ??



Paul T. Sergeant, Professor, M.D., Leuven, Belgium

