

Saturday, January 17, 2015

8.00 – 8.10 am

CTO: how to develop a successful program

Emmanouil S. Brilakis, MD, PhD

Director, Cardiac Catheterization Laboratories

VA North Texas Healthcare System

Associate Professor of Medicine, UT Southwestern Medical School

ES Brilakis: Disclosures

**Consulting/speaker honoraria: Abbott
Vascular, Asahi, Boston Scientific,
Elsevier, Somahlution, St Jude
Medical, Terumo**

Employment (spouse): Medtronic

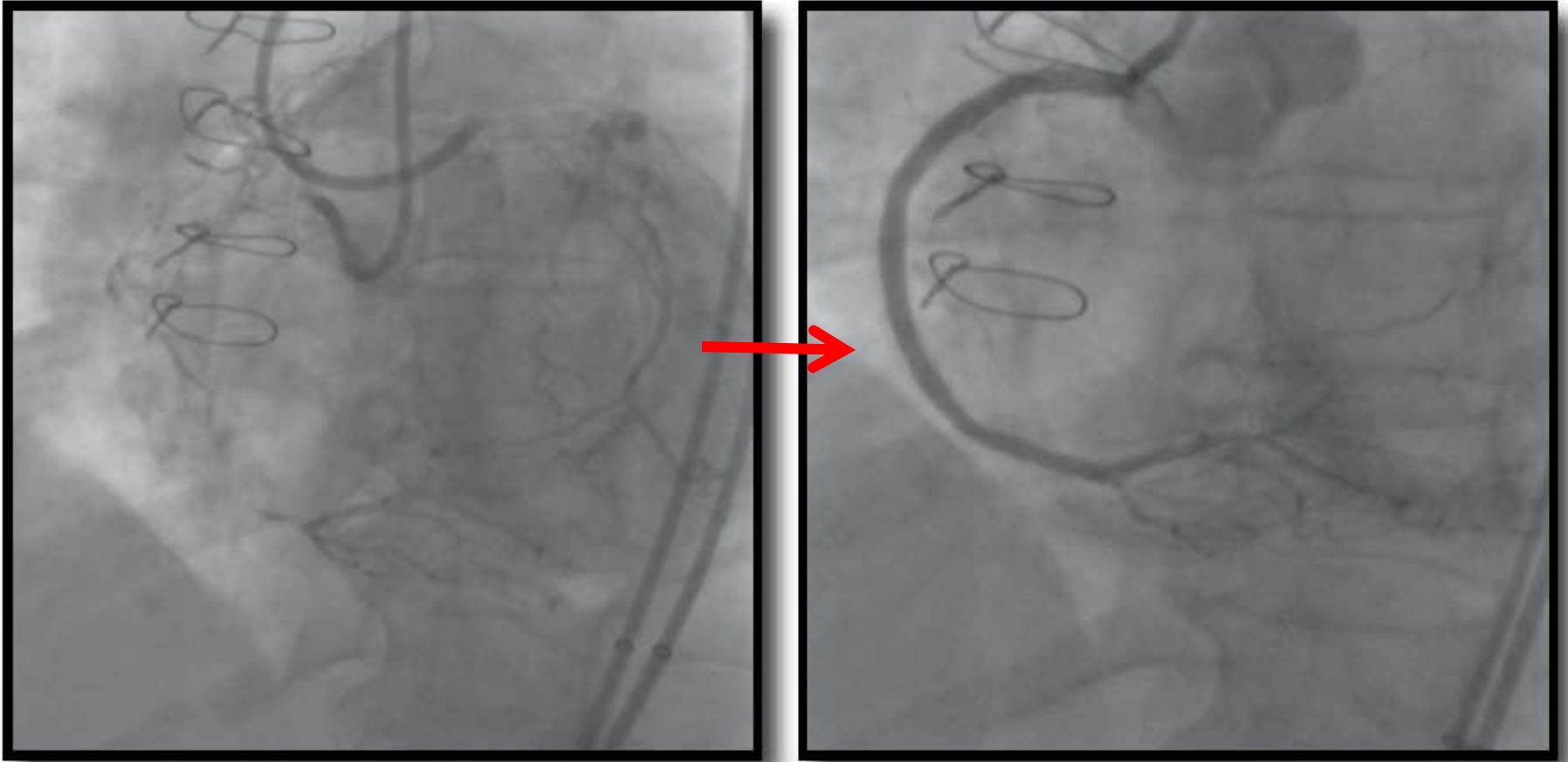
Grants: NIH –1R01HL102442

VA - I01-CX000787-01

VA CSP#571 – DIVA

Guerbet - InfraRedx

The cause



CTO Corner

Insights into the expanding field of chronic total occlusion interventions.

THE **WHY** AND HOW OF CTO INTERVENTIONS

by Emmanouil S. Brilakis, MD, PhD

8.



Patient testimonial after right coronary artery CTO intervention

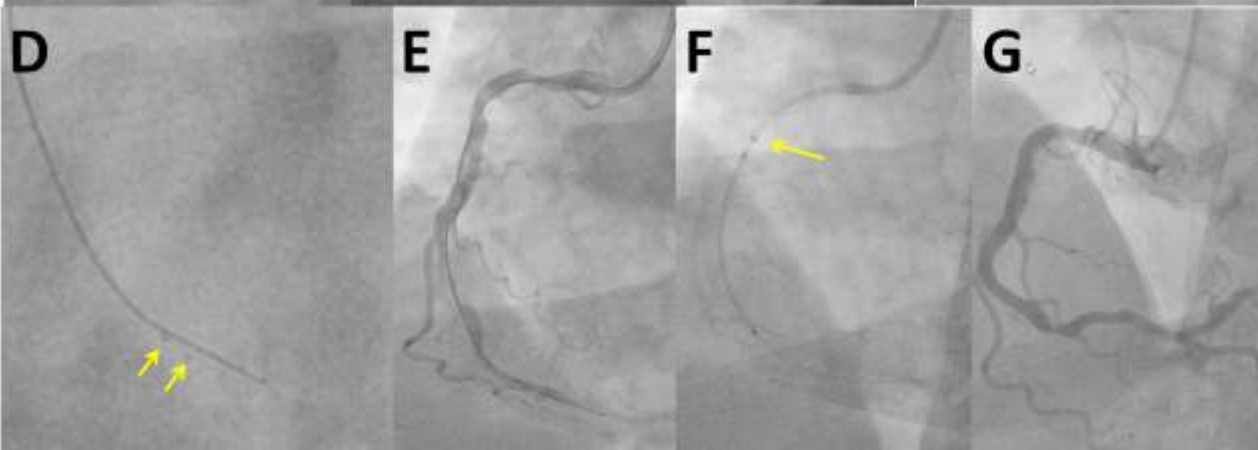
Knuckle Wire and Stingray Balloon for Recrossing a Coronary Dissection After Loss of Guidewire Position



7.

Abelardo A. Martinez-Rumayor, MD, Subhash Banerjee, MD, Emmanouil S. Brilakis, MD, PhD

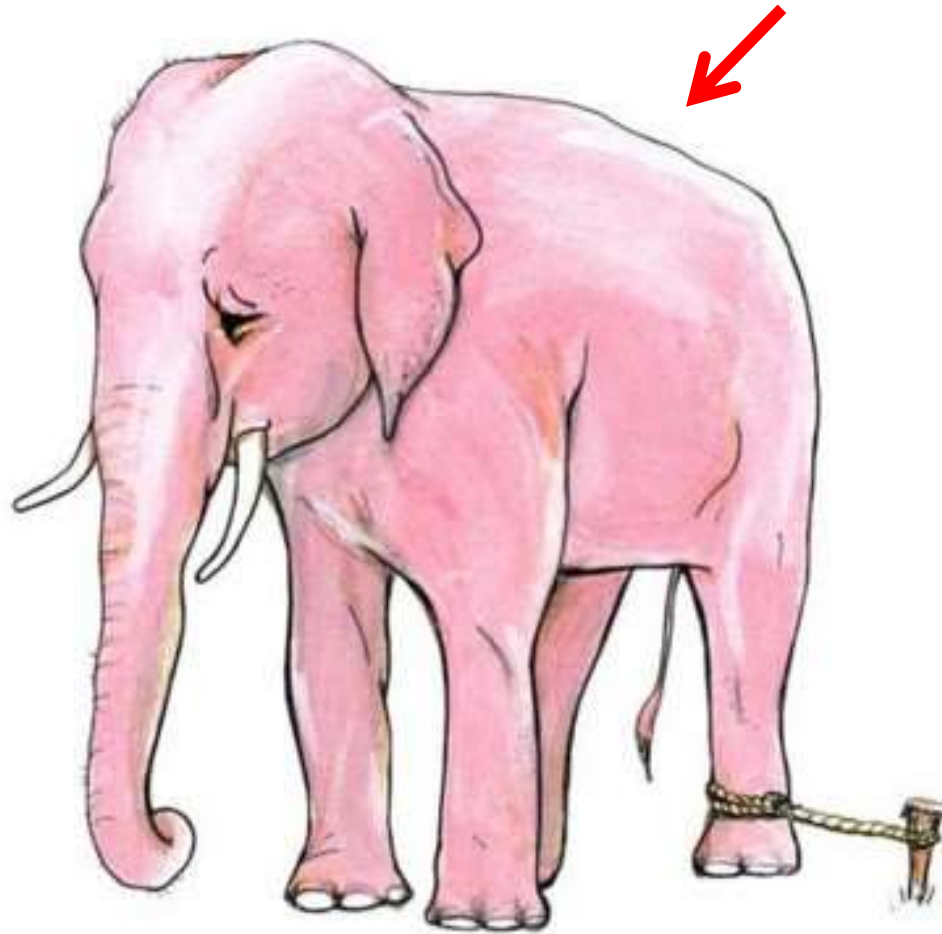
Dallas, Texas



How CTO techniques can help in non-CTO PCI cases!

Martinez-Rumayor et al. JACC Intv 2012

Interventional cardiologist



Fixed vs **Growth** mindset



PROspective Global REgiStry for the Study of CTO interventions

- Appleton Cardiology, WI
- Dallas VAMC/UTSW, TX
- Peaceheath Bellingham, WA
- Piedmont Heart Institute, GA
- St Luke's Mid America Heart Institute, MO
- Torrance Medical Center, CA

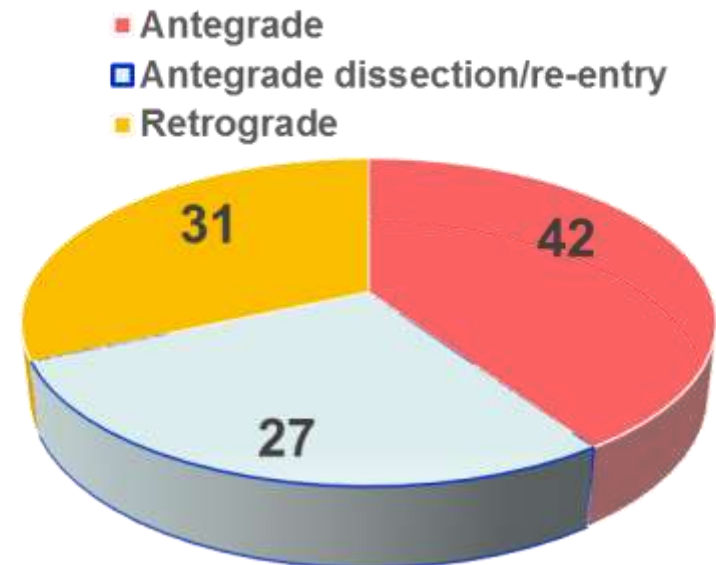
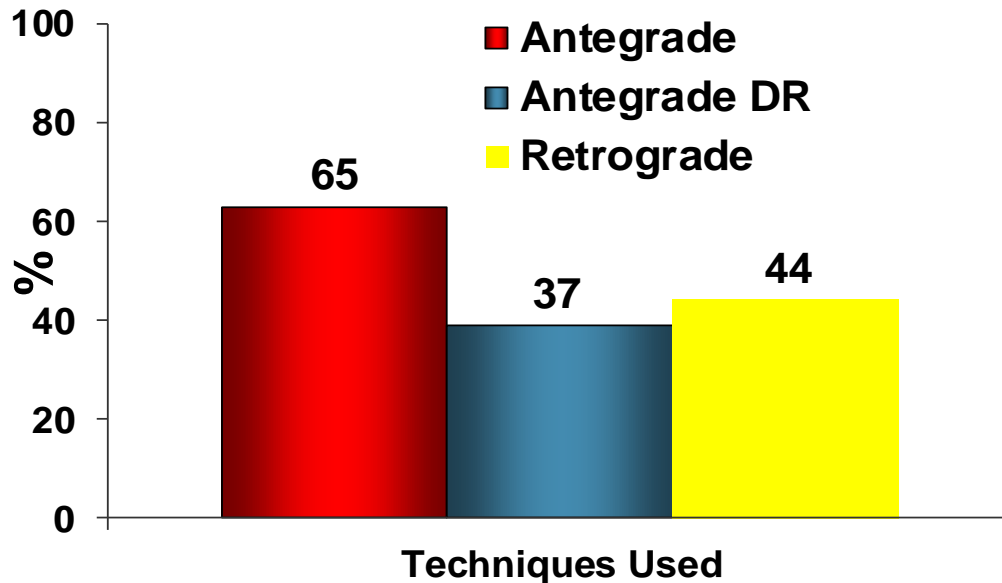
1/2012 to 2/2014

n=632

Technical success: **92.4%**

Major complications: **1.9%**

Successful technique

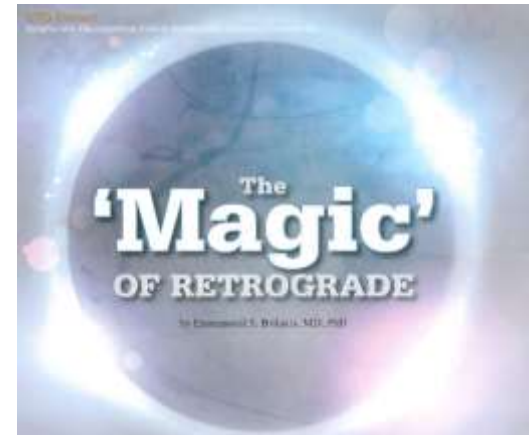


Operator



8 secrets to success





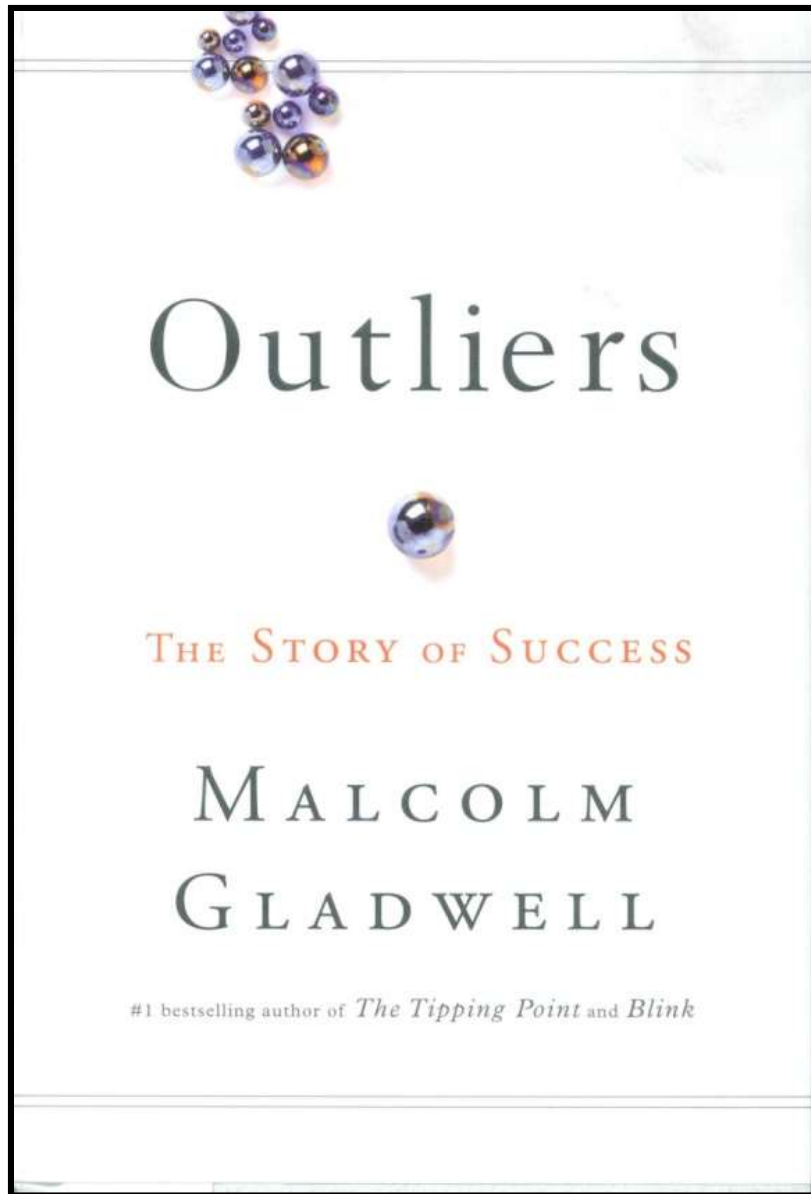
The only way to do great work is to love what you do. If you haven't found it yet, keep looking. Don't settle. As will all matters of the heart, you'll know it when you find it.
Steve Jobs



2.



10,000 hour rule

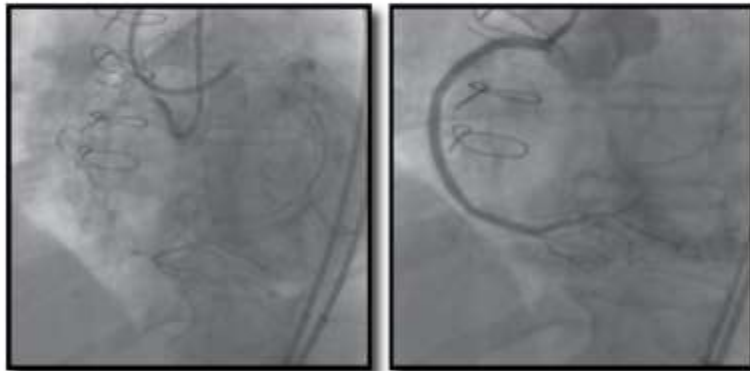


Studying



MANUAL OF CORONARY CHRONIC TOTAL OCCLUSION INTERVENTIONS

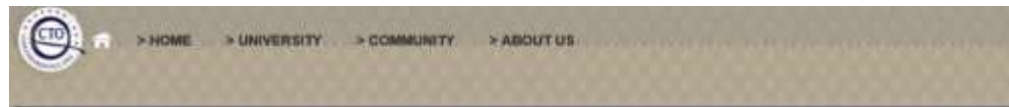
A STEP-BY-STEP APPROACH



EMMANOUIL BRILAKIS

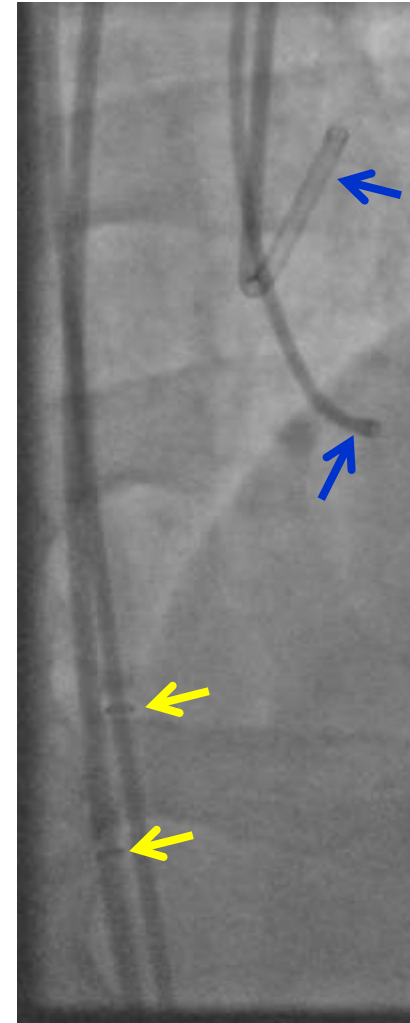


www.ctofundamentals.org



CTO basics

1. Approach: femoral – consider **45 cm sheath**
2. Guide: **7 or 8 French** – support short/shortened **90 cm**
3. Virtually always: **dual injections**
4. Anticoagulation: **heparin**
5. Monitor radiation: **AK**
6. Ready to manage complications: **perforation - tamponade**



Hybrid CTO algorithm



4.

1 Dual injection

- 2**
1. Ambiguous proximal cap
 2. Poor distal target
 3. Appropriate "interventional" collaterals

no yes

Antegrade

6 Retrograde

3 Lesion length <20 mm

yes

no

4 Antegrade wiring

5 Antegrade dissection and reentry

Retrograde true lumen puncture

Retrograde dissection and reentry

Controlled (Stingray)

Wire based (LaST)

7 Switch Strategy

Brilakis, Grantham, Rinfret, Wyman, Burke, Karpaliotis, Lembo, Pershad, Kandzari, Buller, De Martini, Lombardi, Thompson. JACC Intv 2012

Birth of the hybrid algorithm

Jan 2011 – Bellingham, WA



Proctoring



COMPLEX CORONARY INTERVENTIONS XII

Wednesday, January 21, 2015 - 1pm CST

Presenter:



Srini Potluri, MD, FACC
*Director, Cardiac Catheterization
Laboratory
The Heart Hospital Baylor Plano*

Moderators:



Manos Brilakis, MD, PhD
Subhash Banerjee, MD

*Cardiac Catheterization
Laboratories, VA North Texas
Healthcare System*

organized by:



supported by unrestricted
educational grants from:



 Abbott Vascular

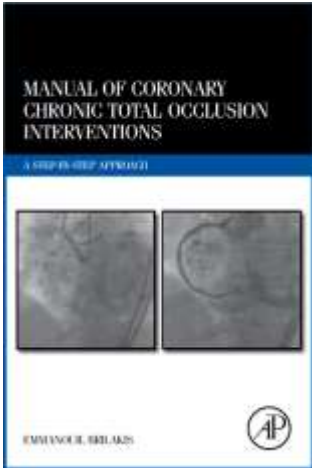
Webcast link:

[Join WebEx meeting](#)

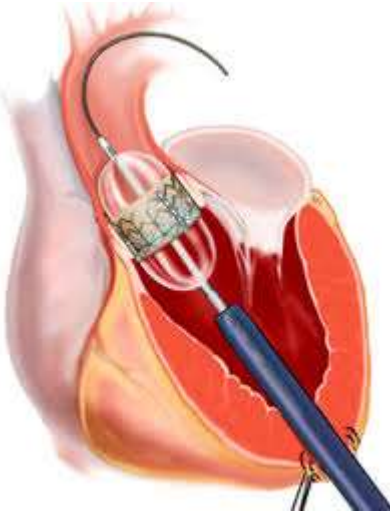
3.



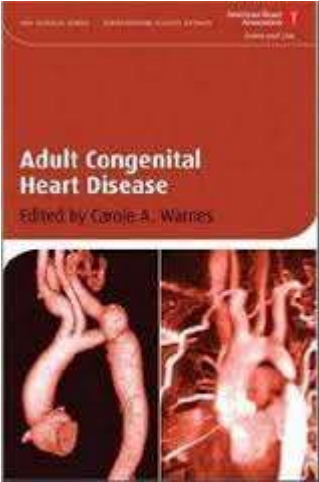
CTO



Structural



Congenital

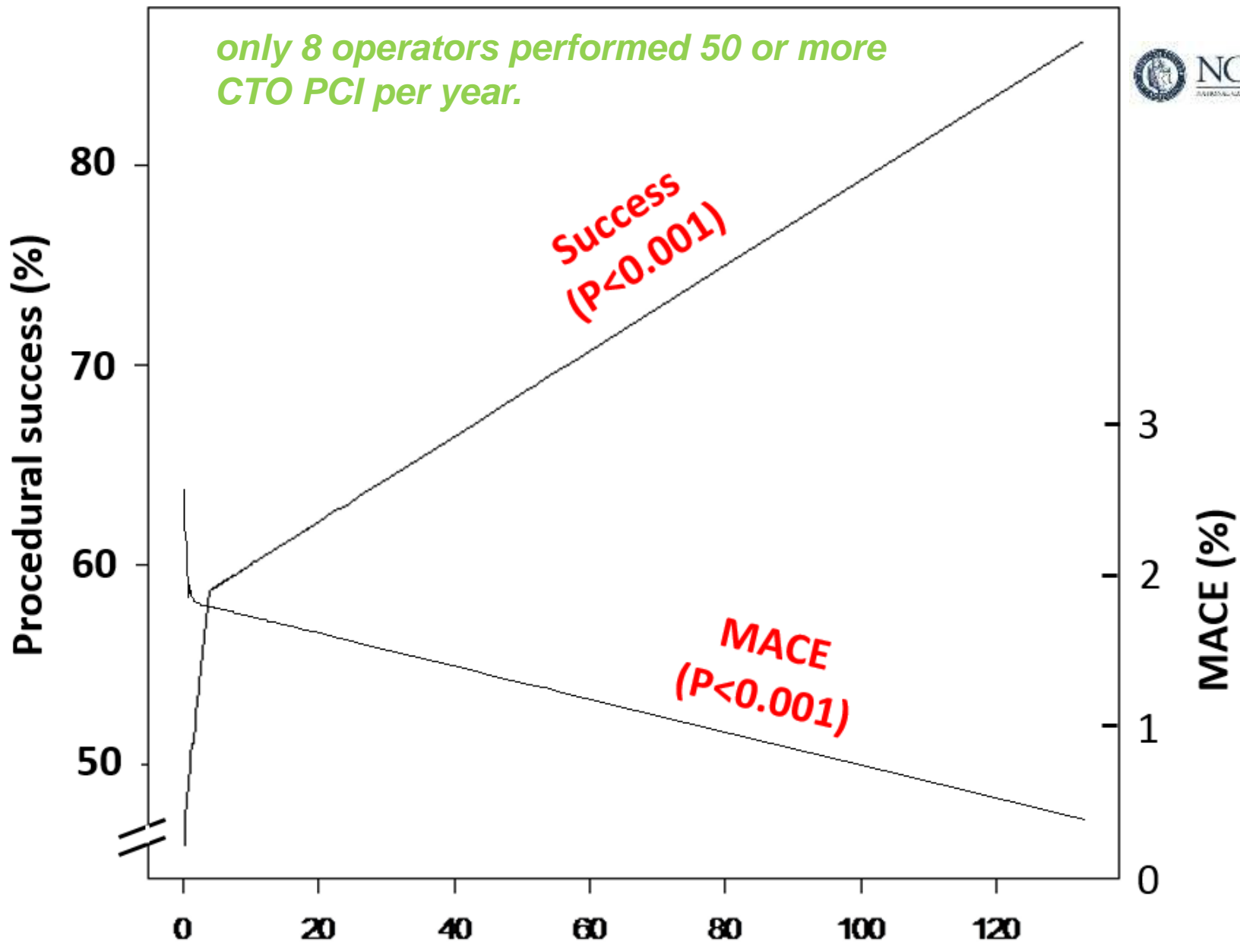


Peripheral



Excellence in Peripheral Arterial Disease

only 8 operators performed 50 or more CTO PCI per year.



Mean annual CTO volume

Brilakis et al, JACC Cardiovasc Intv 2015 – in press

Operator



Cath Lab



CTO cart

Coils
Delivery microcatheters

Finewire
Corsair

Short wires

Long wires



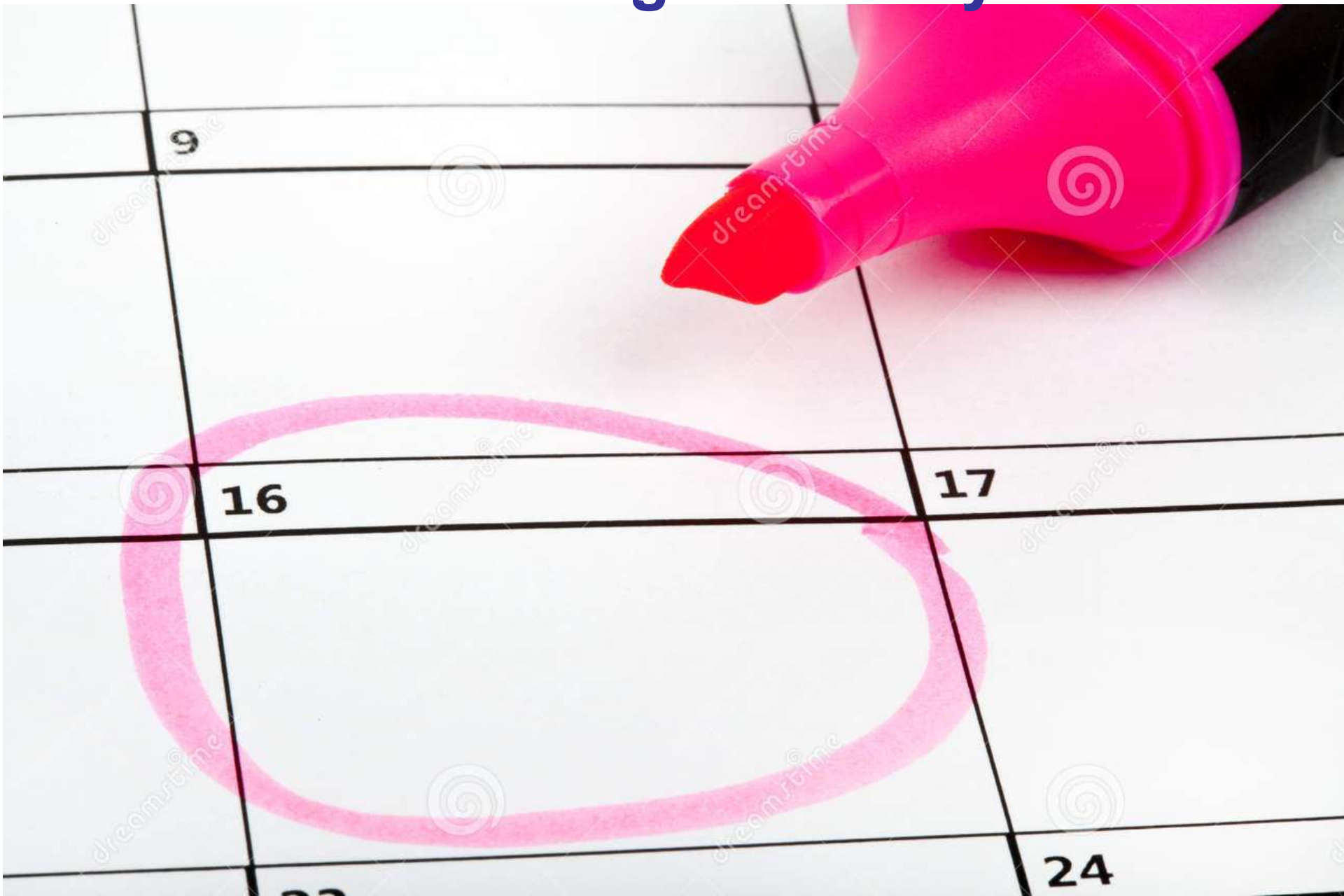
Radiation Exposure



- Minimize fluoro
- 7.5 fps
- Fluoro-store
- Watch AK

A		B		
Coronaries		Coronaries		
Cardiac		Cardiac		
Detail	Norm	Detail	Norm	
fps	15.0	fps	15.0	
kV	84	kV	84	
mA	85	mA	85	
ms	9	ms	9	
Fluoro		Fluoro		
Detail	Low	Detail	Low	
fps	15	fps	7.5	
kV	82	kV	95	
mA	17.6	mA	7.5	
Total time (min)	2.0	Total time (min)	2.0	
Exposure Dose		Exposure Dose		
X-ray time (min)	2.5	X-ray time (min)	2.5	
AK	mGy	494	mGy	494
DAP	cGy.cm2	4313	cGy.cm2	4313

Scheduling “CTO days”



Operator



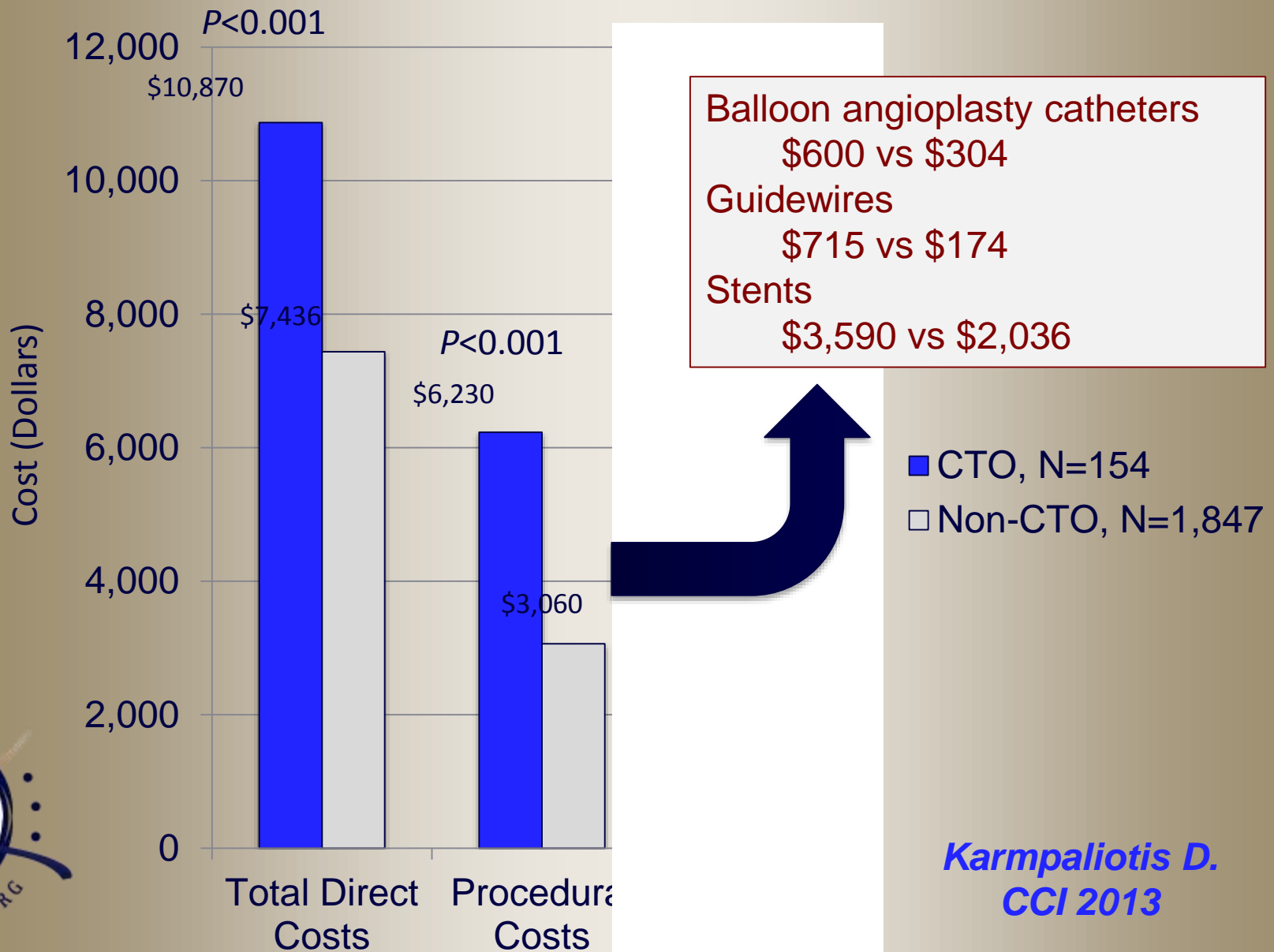
Cath Lab



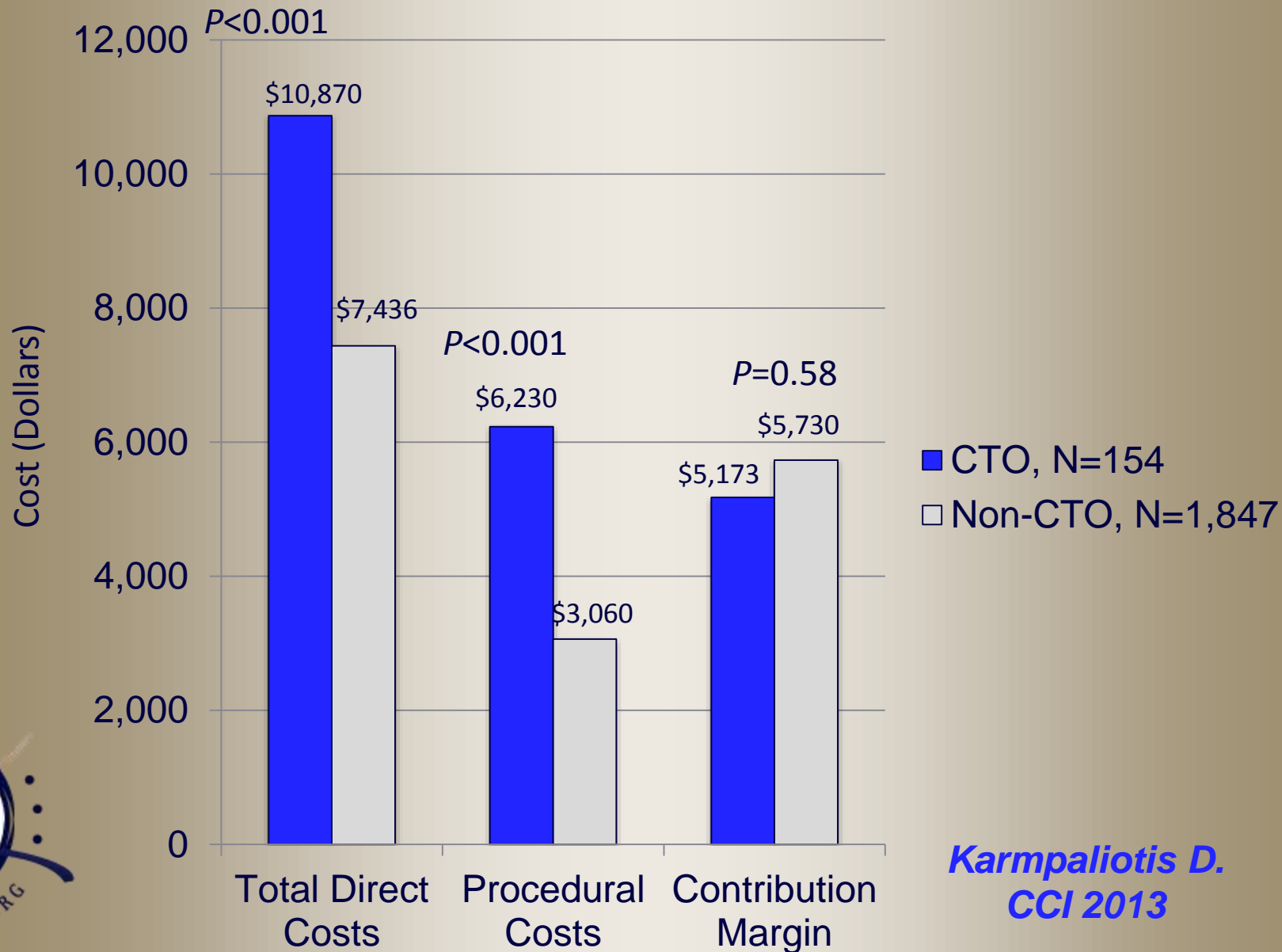
Administration



CTO Revascularization: Economic Outcomes



CTO Revascularization: Economic Outcomes



Karmpaliotis D.
CCI 2013

Idea

The halo effect

All latest updates

If we see a person first in a good light, it is difficult subsequently to darken that light

Oct 14th 2009 | Online extra



Timekeeper



172



29

The existence of the so-called halo effect has long been recognised. It is the phenomenon whereby we assume that because people are good at doing A they will be good at doing B, C and D (or the reverse—because they are bad at doing A they will be bad at doing B, C and D). The phrase was first coined by Edward Thorndike, a psychologist who used it in a study published in 1920 to describe the way that commanding officers rated their soldiers. He found that officers usually judged their men as being either good right across the board or bad. There was little mixing of traits; few people were said to be good in one respect but bad in another.

Operator



Cath Lab



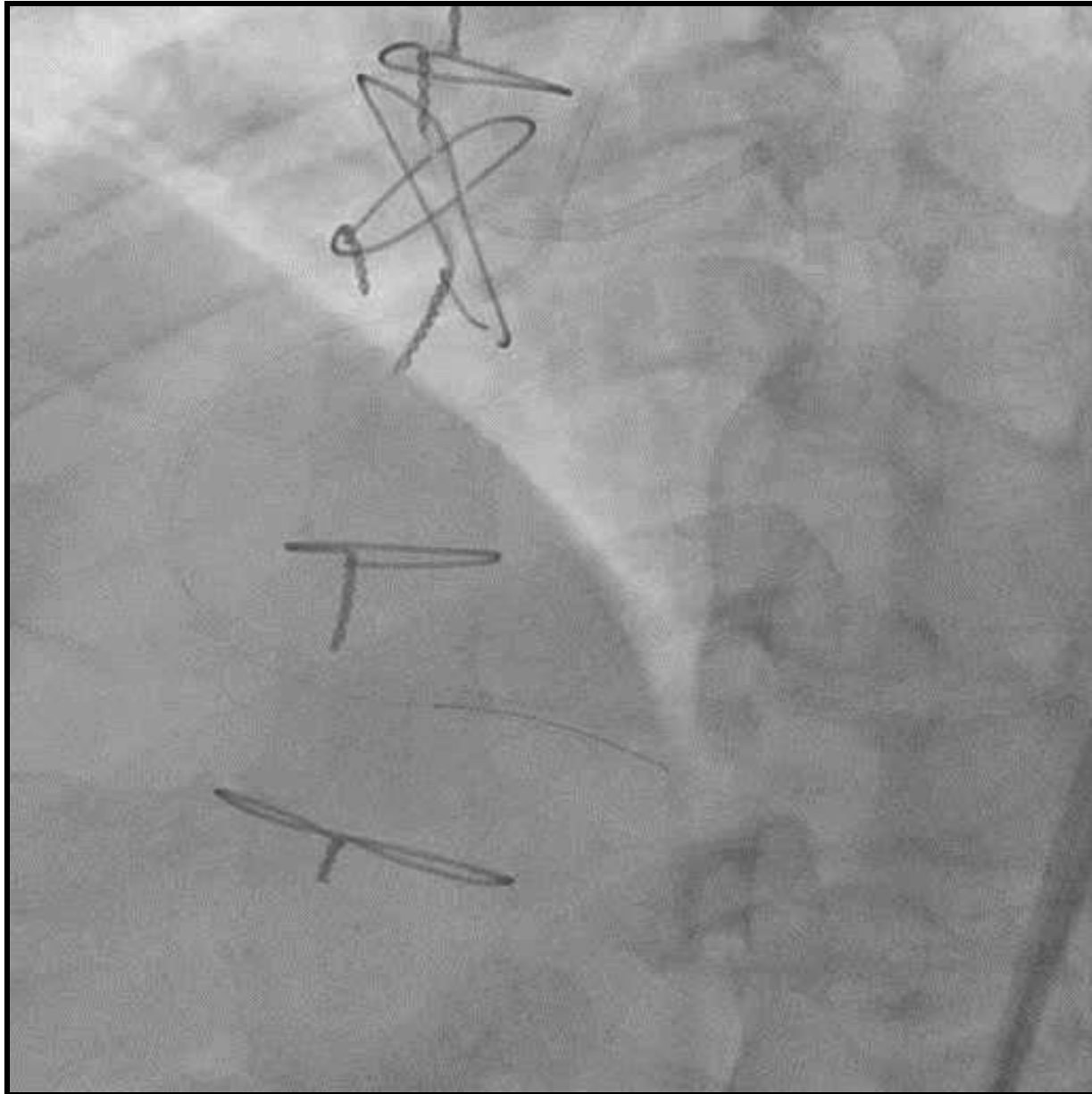
Administration



Referring MDs/pts



Share your successes



CTO PCI is a Journey

A photograph of a sailboat on a calm body of water at sunset. The sun is low on the horizon, creating a bright orange and yellow glow that reflects on the water. The sky is filled with soft, wispy clouds. In the background, there are dark silhouettes of hills or mountains. The overall mood is serene and contemplative.

When you start on the way to Ithaca, wish that the way be long, full of adventure, full of knowledge...

Constantine P. Cavafy