Hangi KTO'ya Girişim
Hangisine Antegrad
Hangisine Retrograd

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- Yapılan büyük çalışmalarda ve meta-analizlerde KTO'ların başarılı revaskülarizasyonunun sol ventrikül fonksiyonlarını düzelttiği, semptomları gerilettiği, mortaliteyi, CABG gereksinimini ve ventriküler aritmilere olan yatkınlığı azalttığı gösterilmiştir

1. Olivari Z J Am Coll Cardiol 2003;41:1672–78.
2. Suero JA, Coronary intervention of a chronic total occlusion in native coronary arteries: a 20-year experience. J Am Coll Cardiol 2001:38:409-14.
3. Joyal D,. Am Heart J 2010;160:179–187.
4. Stone GW. Circulation 2005;112:2364-72.

Theoretical Rationale for CTO Revascularization
'Open Artery Hypothesis'

Study	Year	N	Follow-Up Yrs	Mortality Difference (%)	P Value
Suero	2001	2,007	10	27 vs 35	0.001
Hoye	2003	854	5	6.5 vs 12.0	0.02
Buller	2003	1,458	1	10.0 vs 19.0	0.02
Olivari	2003	376	1	1.1 vs 7.2	0.005
Aziz	2007	543	1.7	2.5 vs 7.3	0.004
Prasad	2008	1,267	10	22 vs 28	0.025
Valenti	2008	486	2	8.4 vs 12.6	0.025
Thompson	2008	487	7	13 vs 26	0.09
DeLabroille	2008	172	2	4.9 vs 5.3	0.30
Mehran	2011	1,791	2.9	6.0 vs 8.6	0.01
Jones	2012	836	5	4.5 vs 17.2	<0.0001
		10,277		***ARR 2.6 – 13.2***	

Meta-Analysis of CTO Outcomes

13 Observational Studies, 7288 patients, weighted average f/u 6 yrs

	OR for Success vs. Failure	95% CI	*P* value
Mortality	0.56	0.43-0.72	<0.001
MI	0.74	0.44-1.25	0.26
Subsequent CABG	0.22	0.17-0.27	<0.001
Residual or Recurrent Angina	0.45	0.30-0.67	0.001

Joyal et al, *Am Heart J* 2010;160:179-87

- Semptomu olan her KTO hastasına perkütan girişim yapılmalıdır.

- Güncel revaskülarizasyon kılavuzu semptom varlığı ya da %10'nun üzerinde tıkalı koroner arter segmentinde iskemi-canlılık gösterilmesi durumunda KTO'nun revaskülarize edilmesini önermektedir.

Yaklaşım

Koroner anjiyo (Bazen MSCT)

Antegrade yaklaşım

1. Tapered güdük
2. Kısa KTO segmenti
3. Mikrokanalların görülmesi
4. KTO segm. kalsifik olmaması

Retrograde yaklaşım

1. Uzun KTO segm (>40 mm)
2. Kolay retrograd yol
3. KTO segm ciddi kalsifikasyon

- KTO vakalarının çok büyük çoğunluğu özellikle yeni telllerin yardımıyla antegrad açılabilmektedir.
- Retrograd yaklaşım her zaman başarı getirmeyebilir
- Retrograd yaklaşımın komplikasyonları daha ciddi olabilir

Antegrad yaklaşım

- Yeterli kateter desteği için damar çıkışı ve balon çapalama imkanının olması
- LAD ve CX osteal okluzyonarda damar çıkışının seçilebilmesi
- Mikrokanal varlığı
- Nispeten az kalsifikasyon olması
- Lezyon uzunluğunun 40mm'den az olması
- Distal damarın iyi dolması ve büyük görünmesi

Retrograd yaklaşım

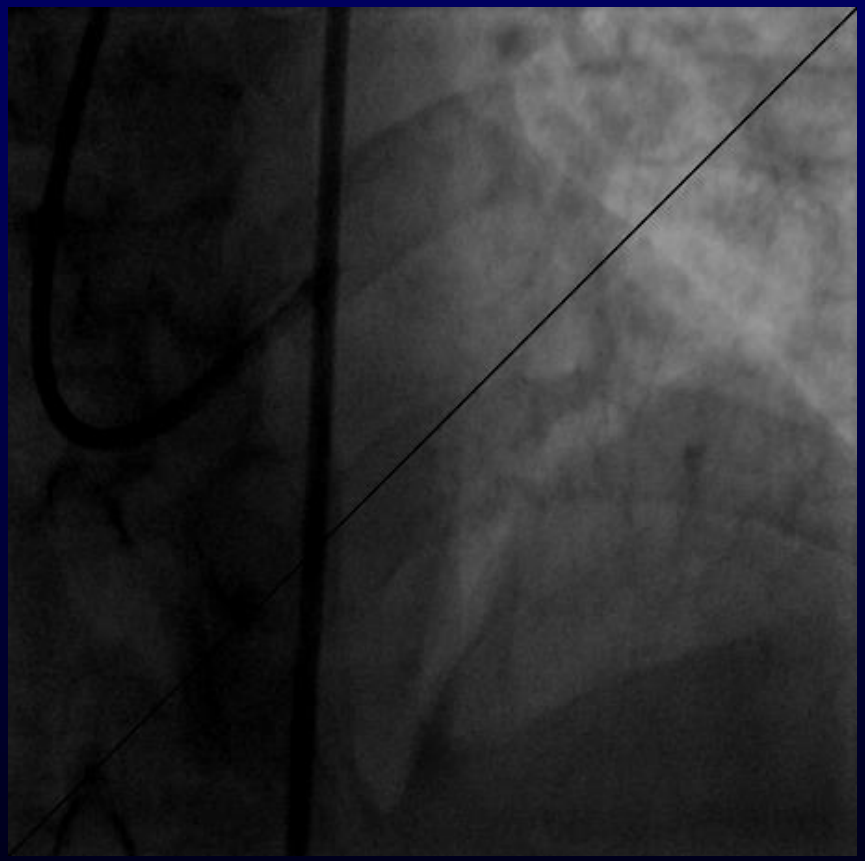
- Proksimal güdüğün nereden çıktığı belli değilse
- Proksimal başlık çok klasifik ise
- Oklüzyon uzunluğu 40'mm den fazla ise
- Flush oklüzyonlu RCA varsa
- LAD ve CX osteal oklüzyonlarda gerektiğinde
- Damarın distali hastalıklı ve ince görünümlü ise,
- KTO bifurkasyonla sonlanıyorsa,
- İşlem için yeterli antegrad destek yoksa
- İyi gelişmiş kollateral varsa

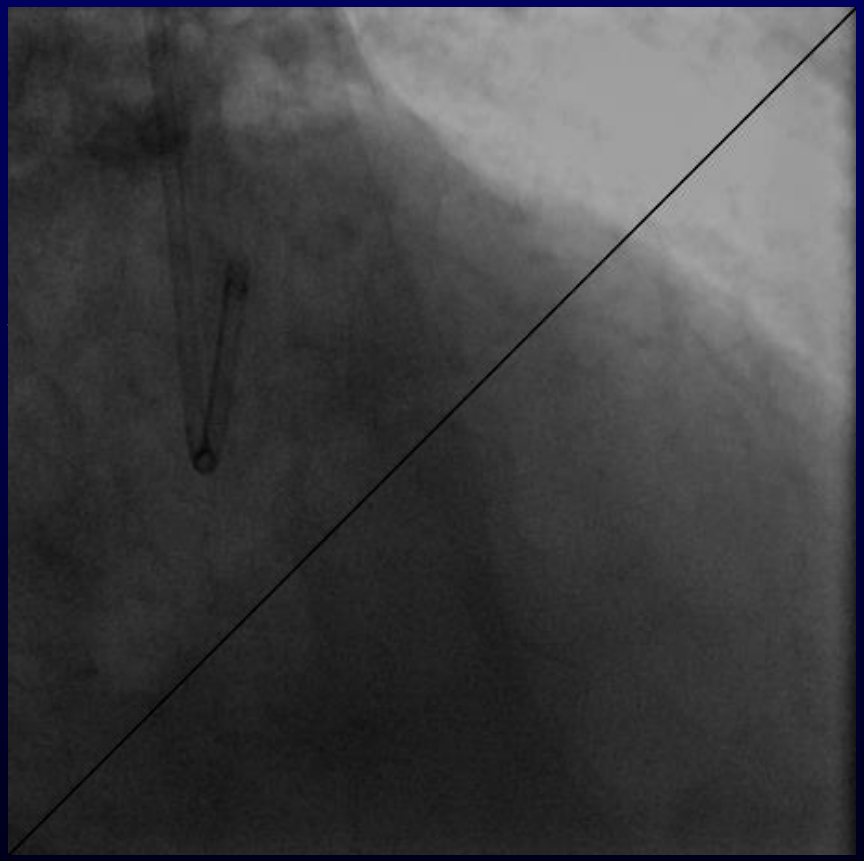
- Uzun olması ve kalsifik olması sorun degil, distal hedef damar yeter kadar büyükse antegrad yapılabilir
- Antegrad vs retrograd yaklaşım birbirinin rakibi değil tamamlayıcısıdır

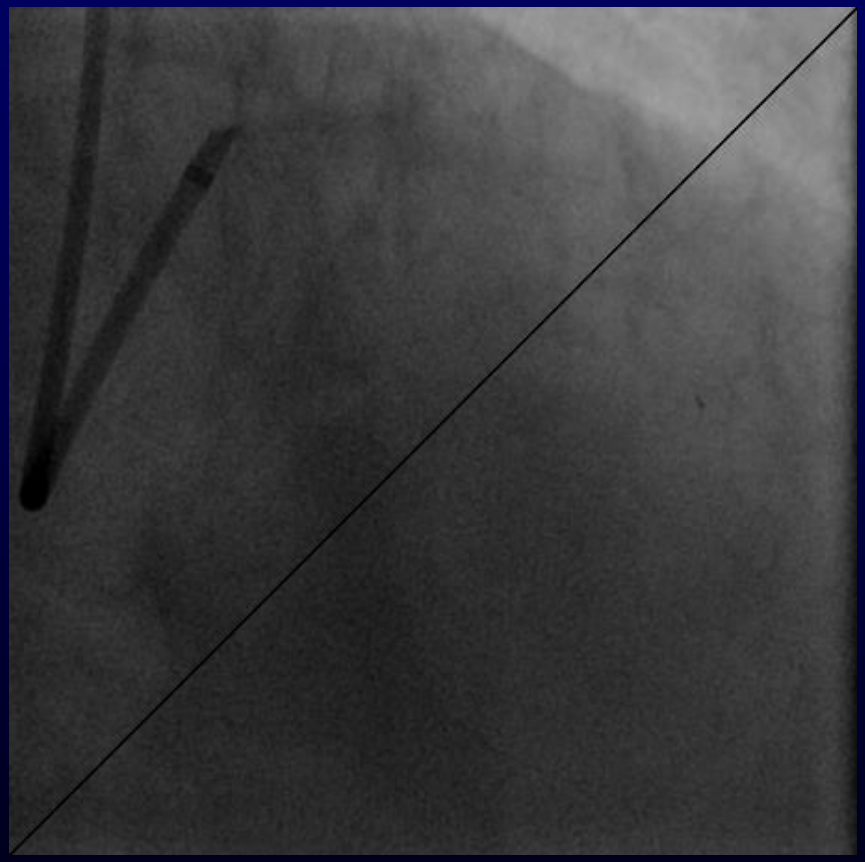
Bezmialem Deneyimi

- Avrupa KTO kulübü üyesi olan kliniğimizin EuroCTO kaydında toplam 363 KTO işlem vardır
- 2012 yılında 120 KTO hastası %91 başarı oranıyla revaskülarize edilmiştir
- Hastalarımızın yaklaşık %12'sinde lezyon retrograd tekniklerle geçilmiştir

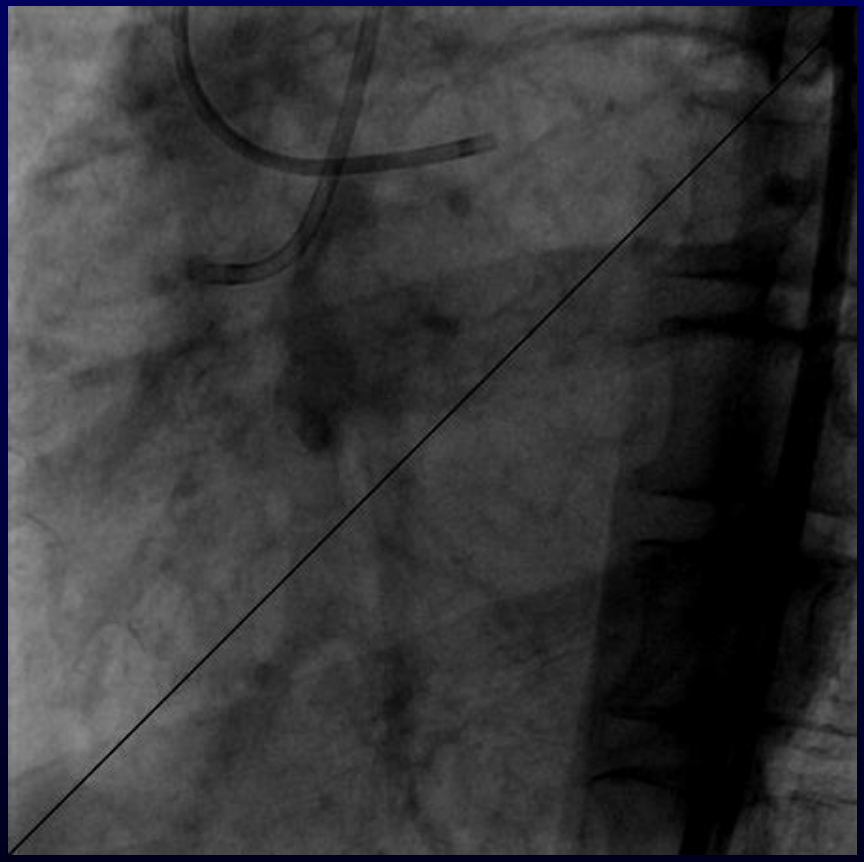
LAD Absorb

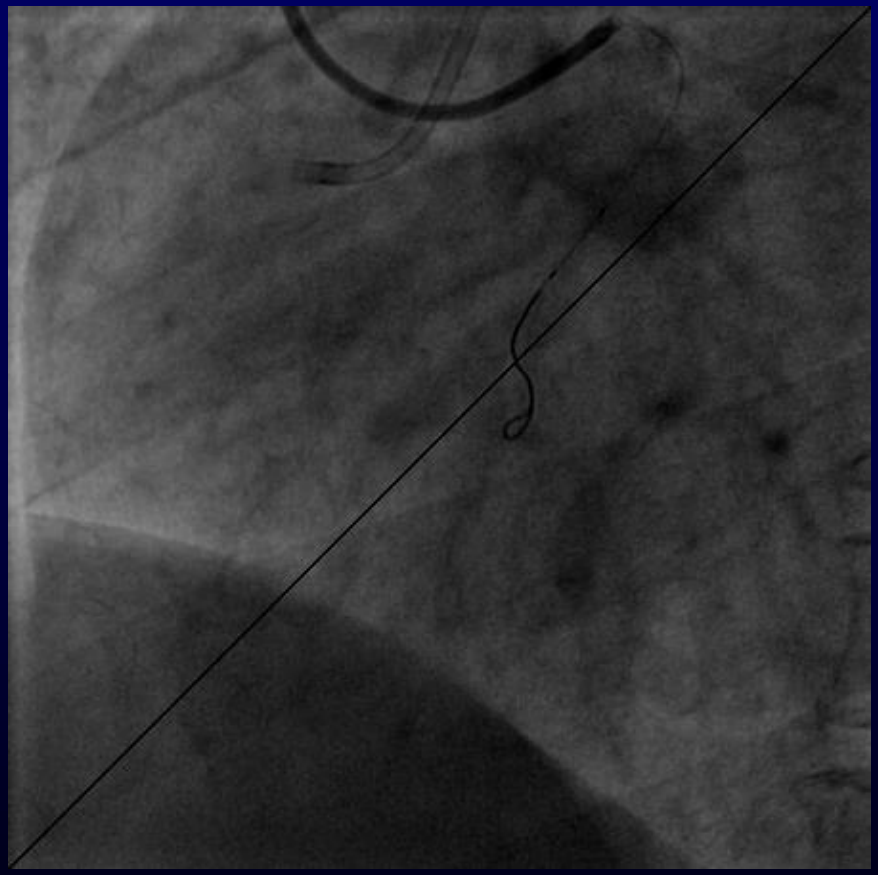


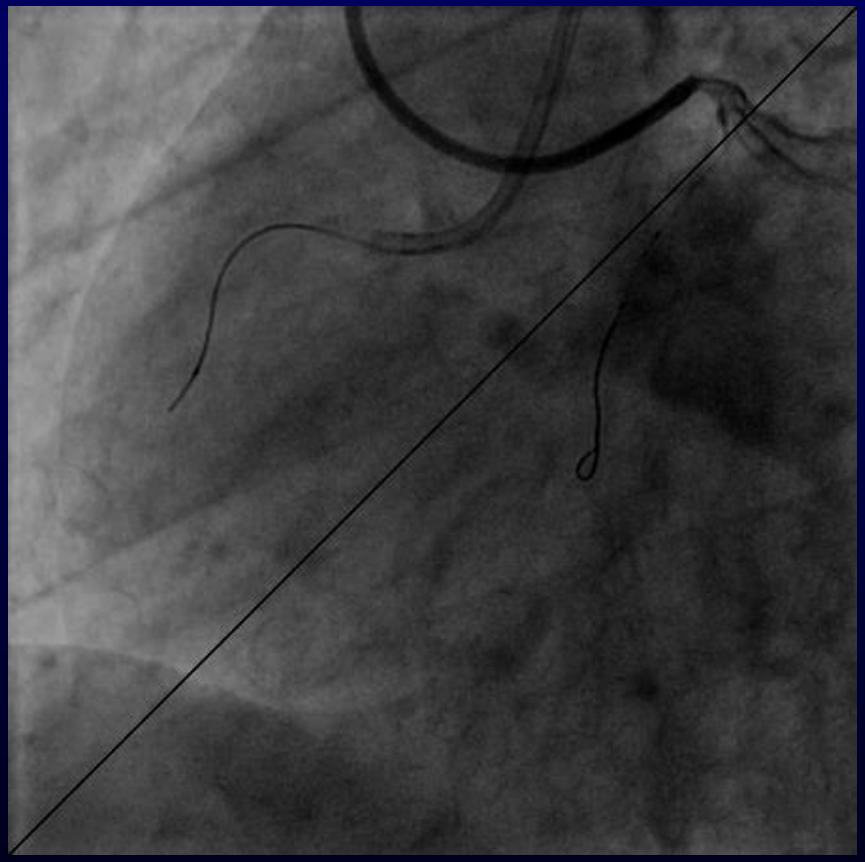


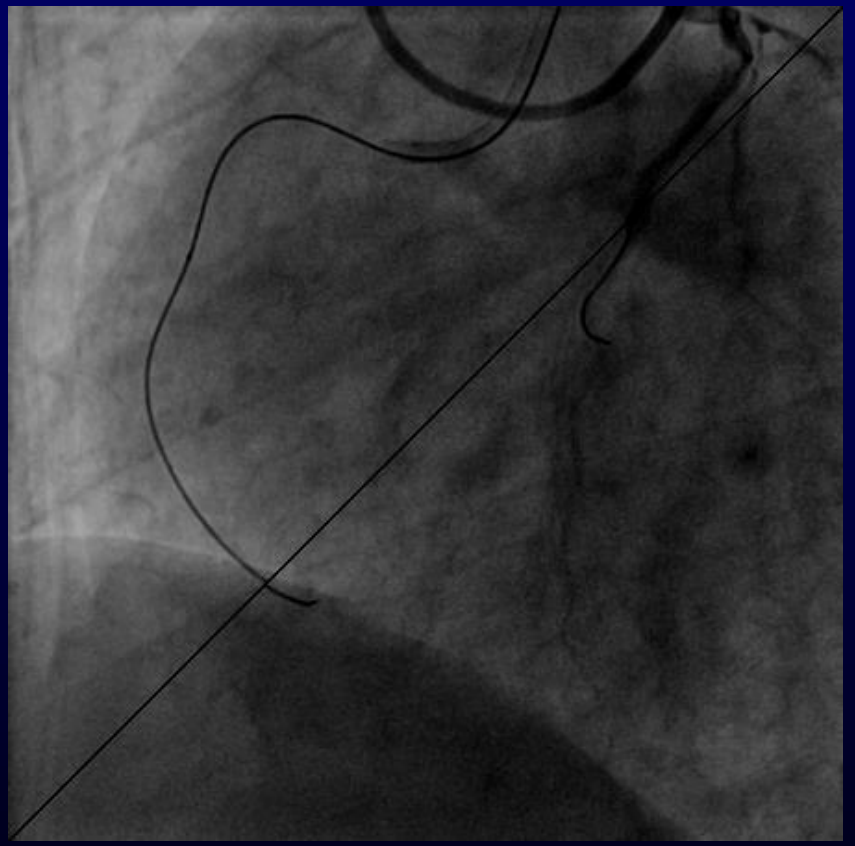


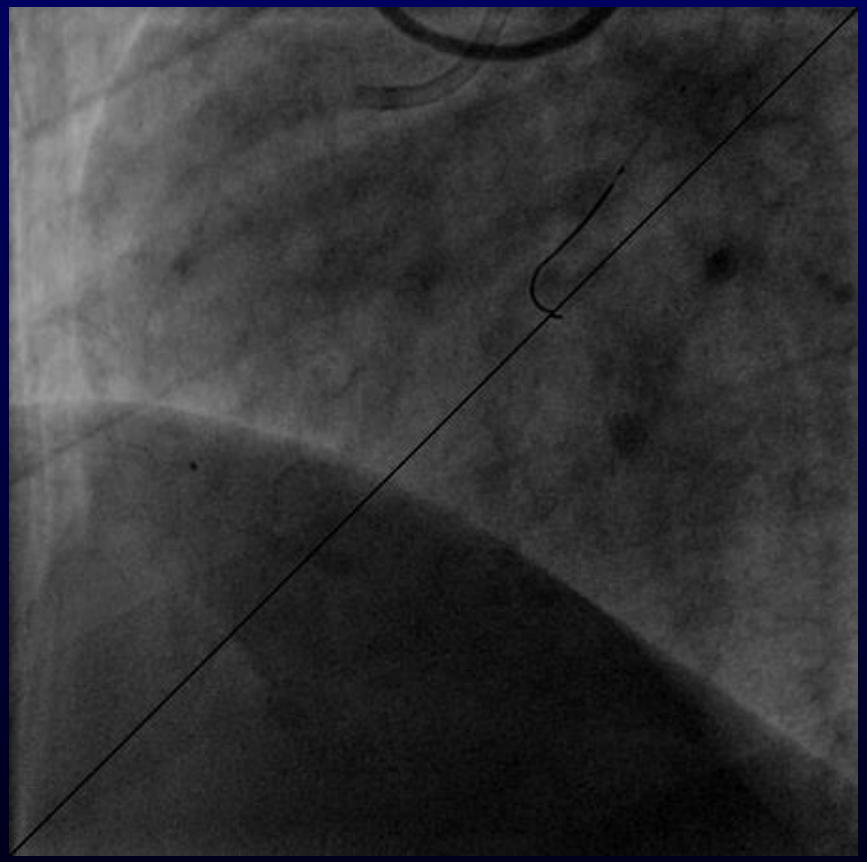
RCA Antegrad

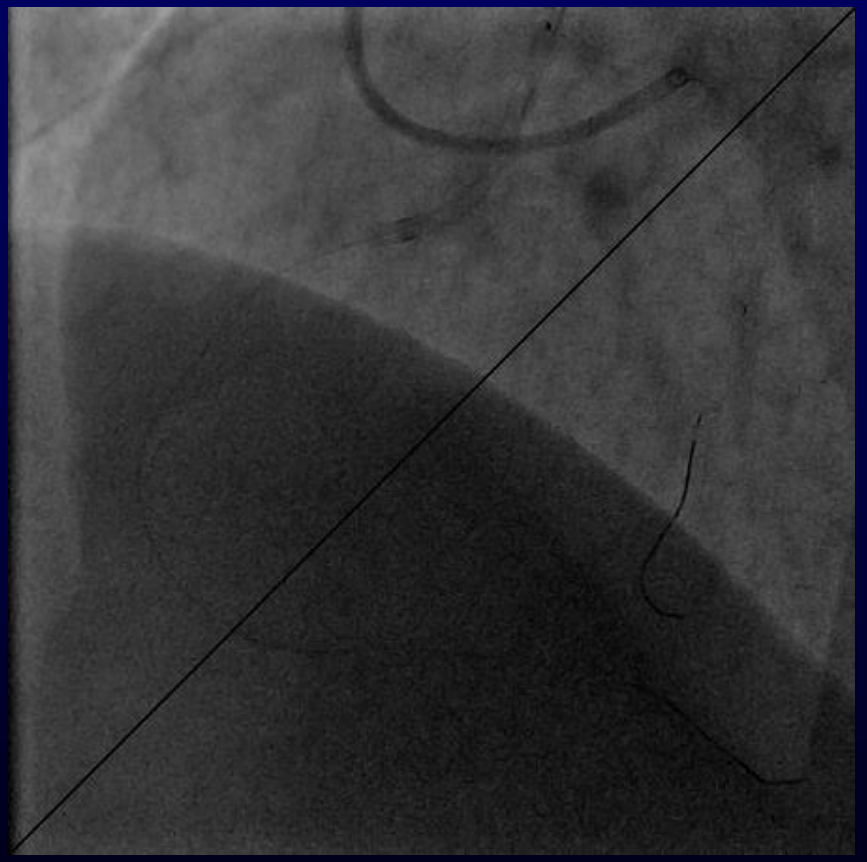


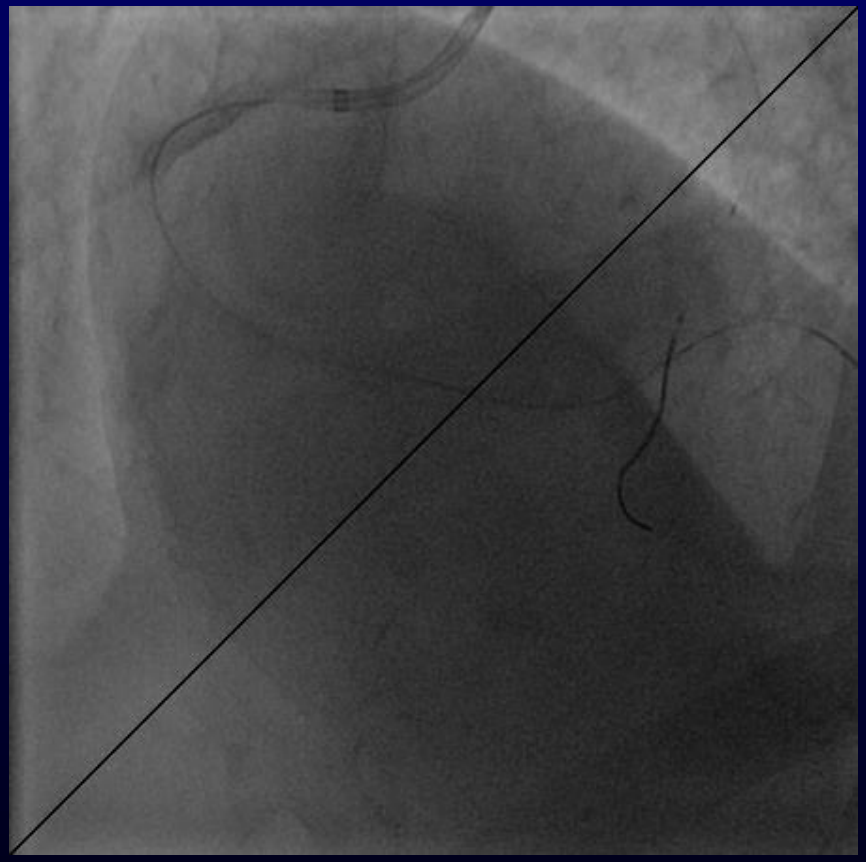




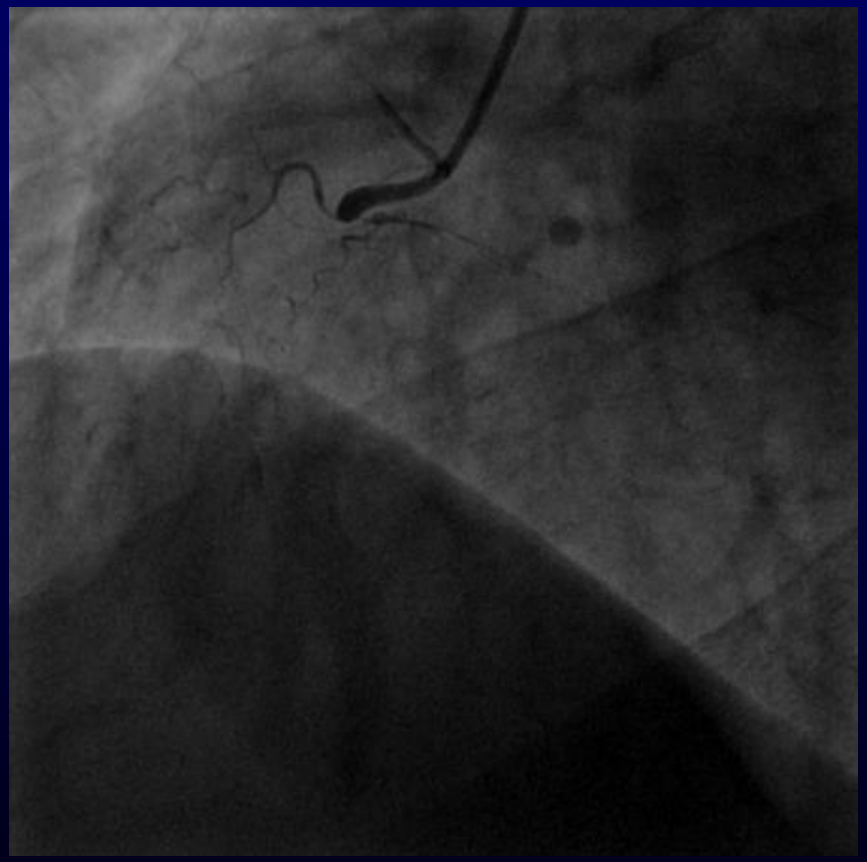


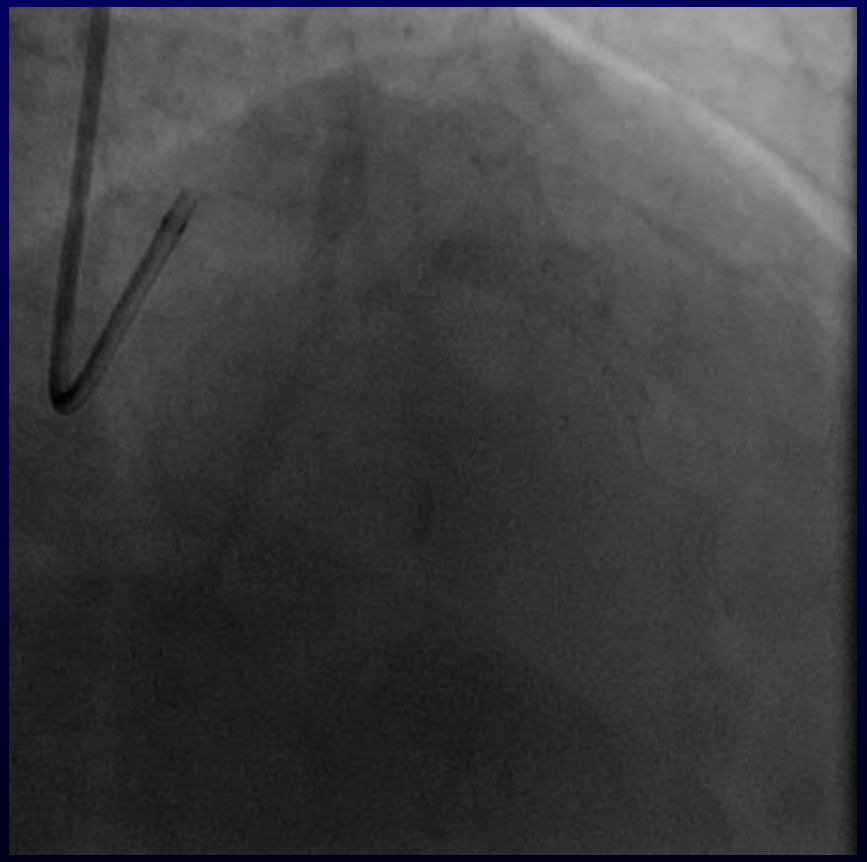


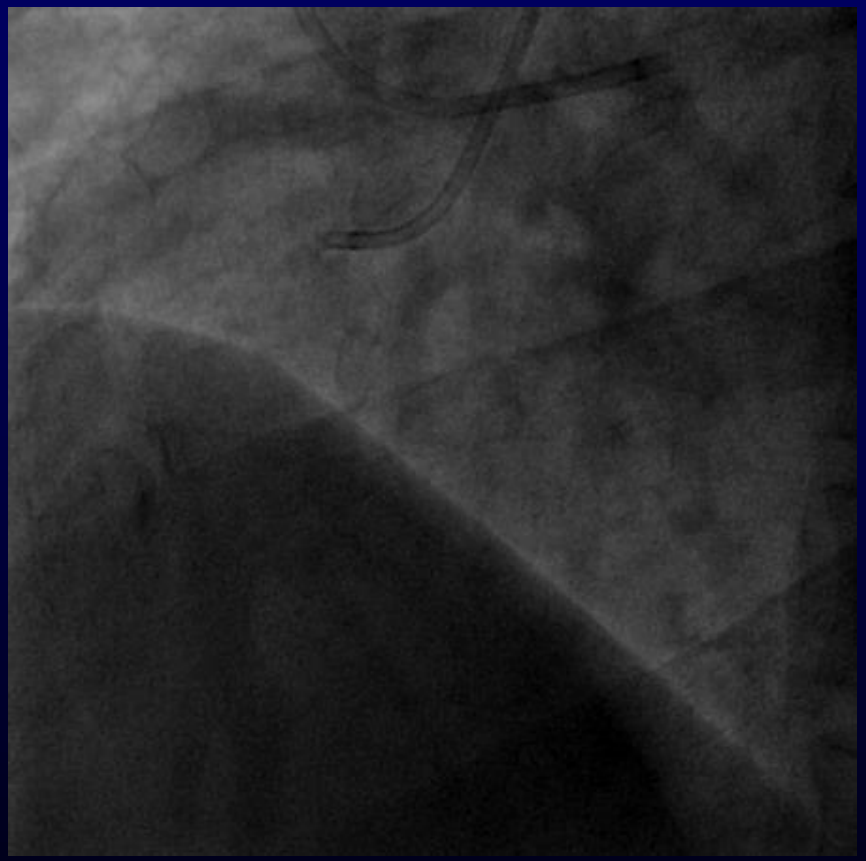


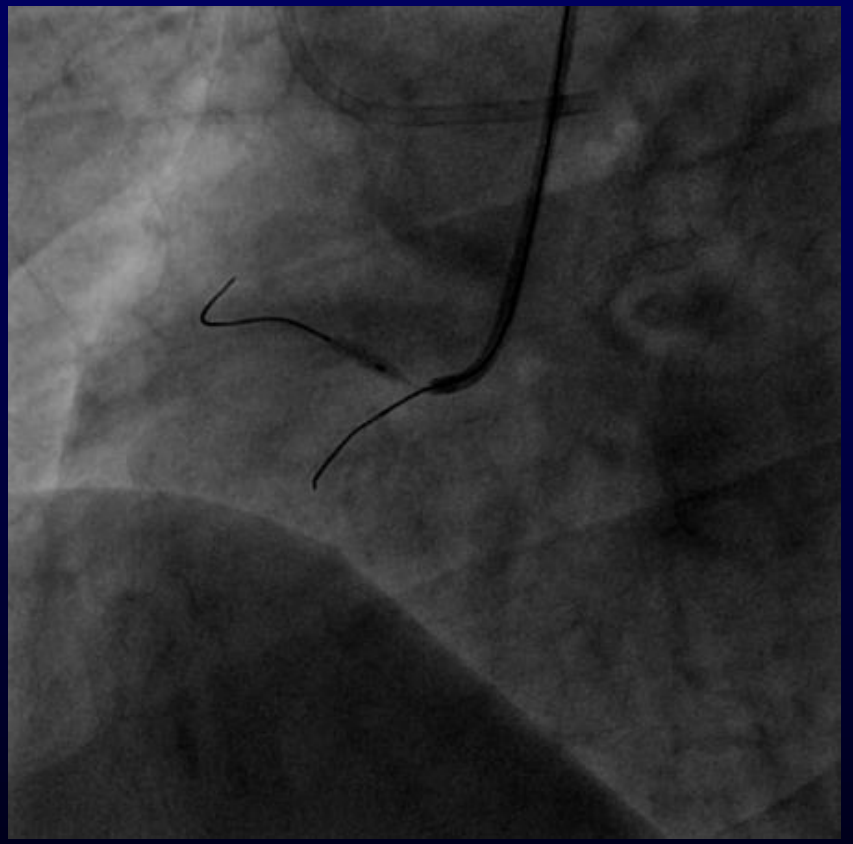


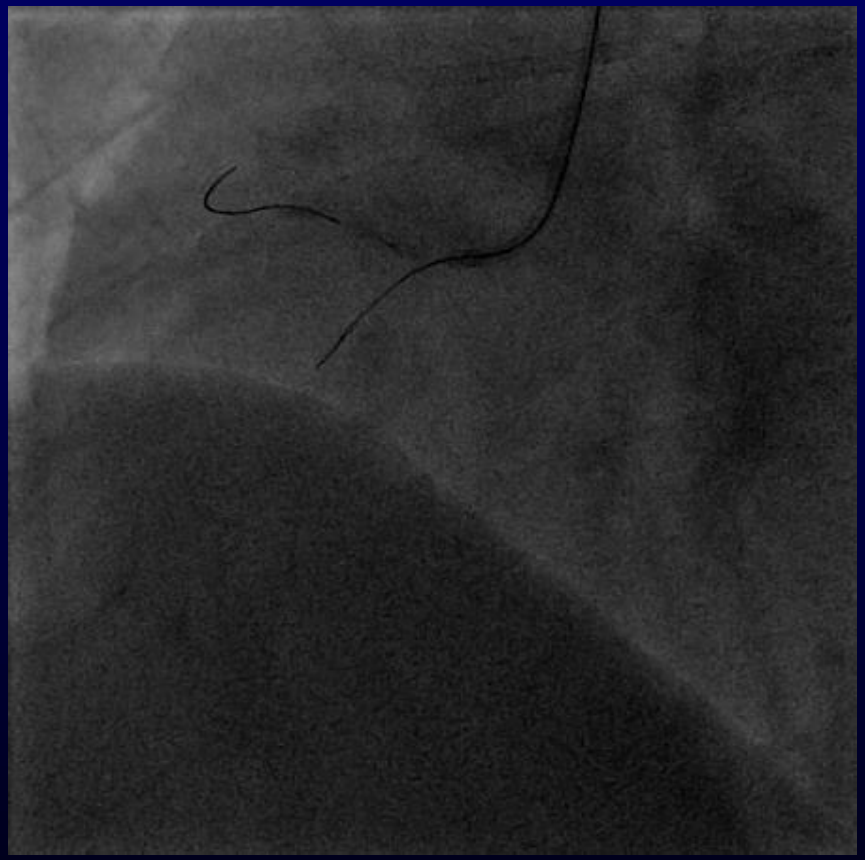
RCA antegrad

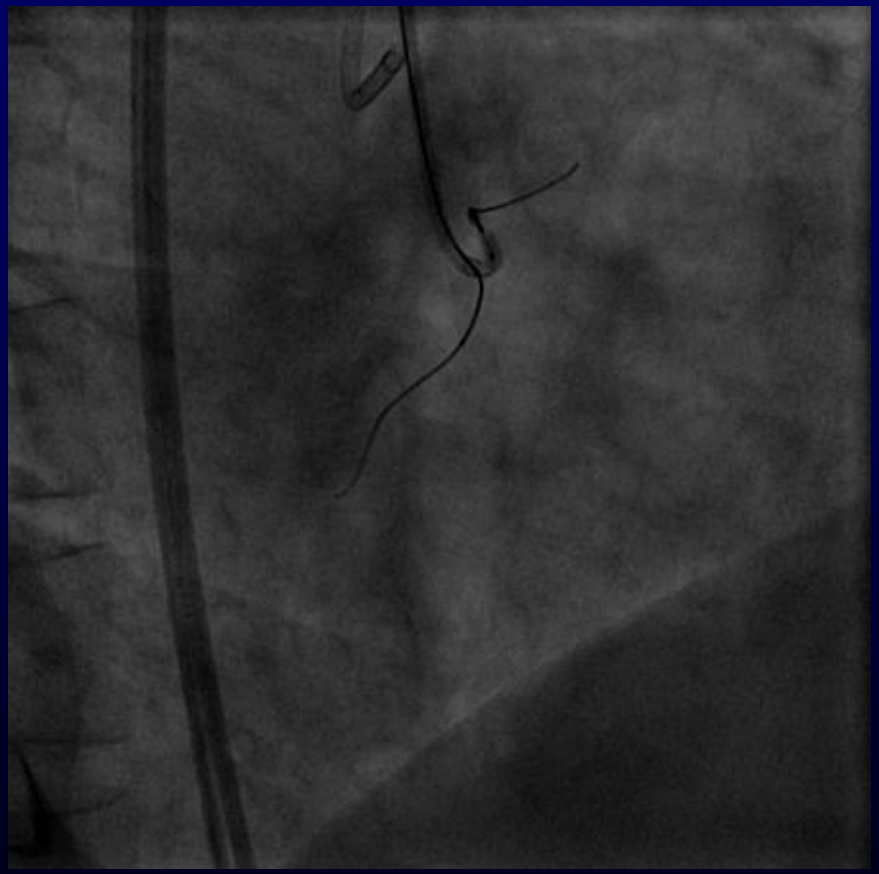


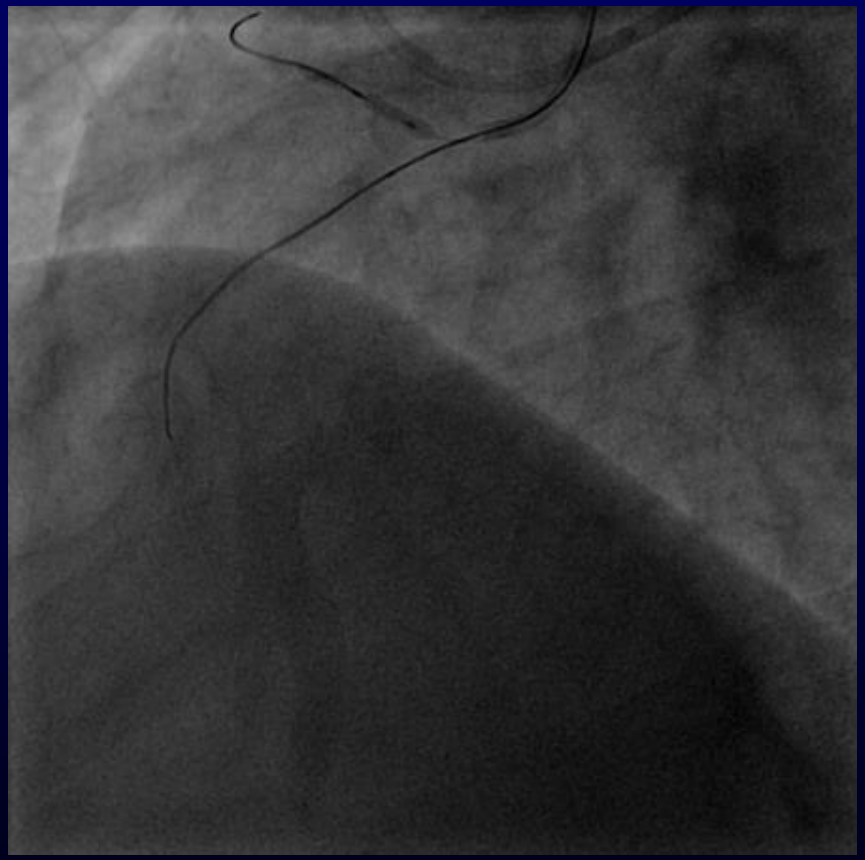


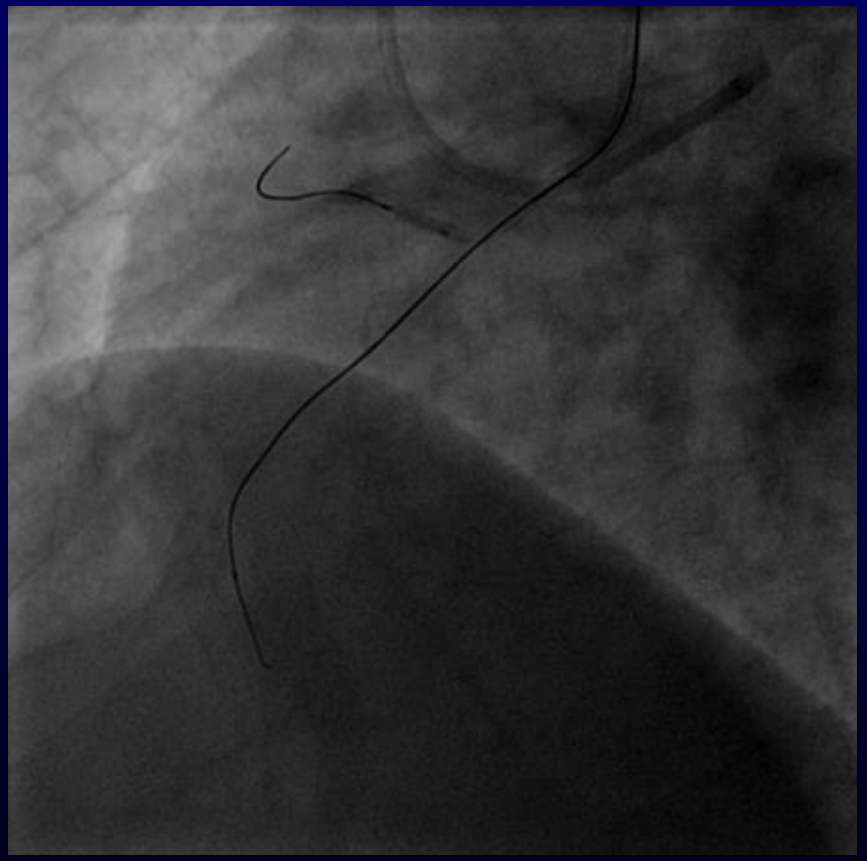


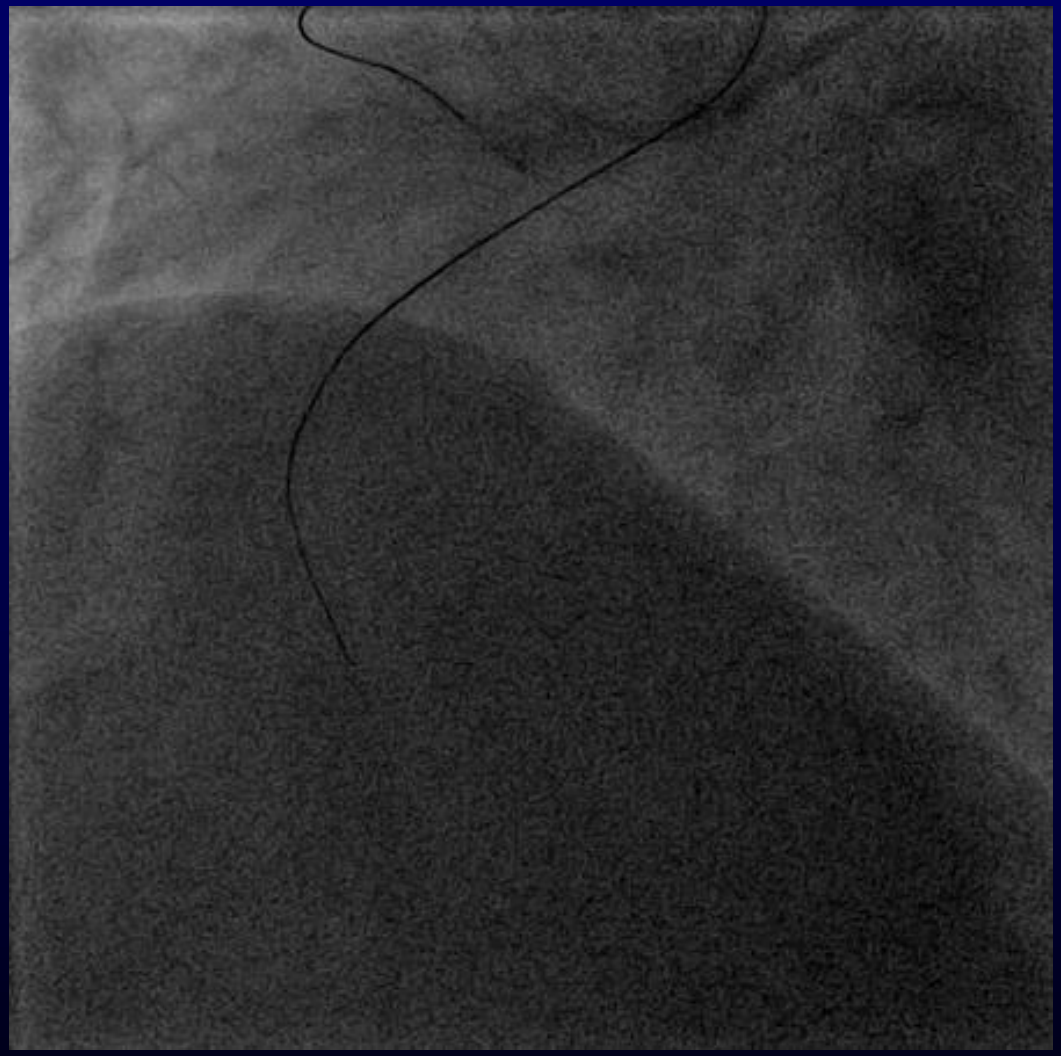


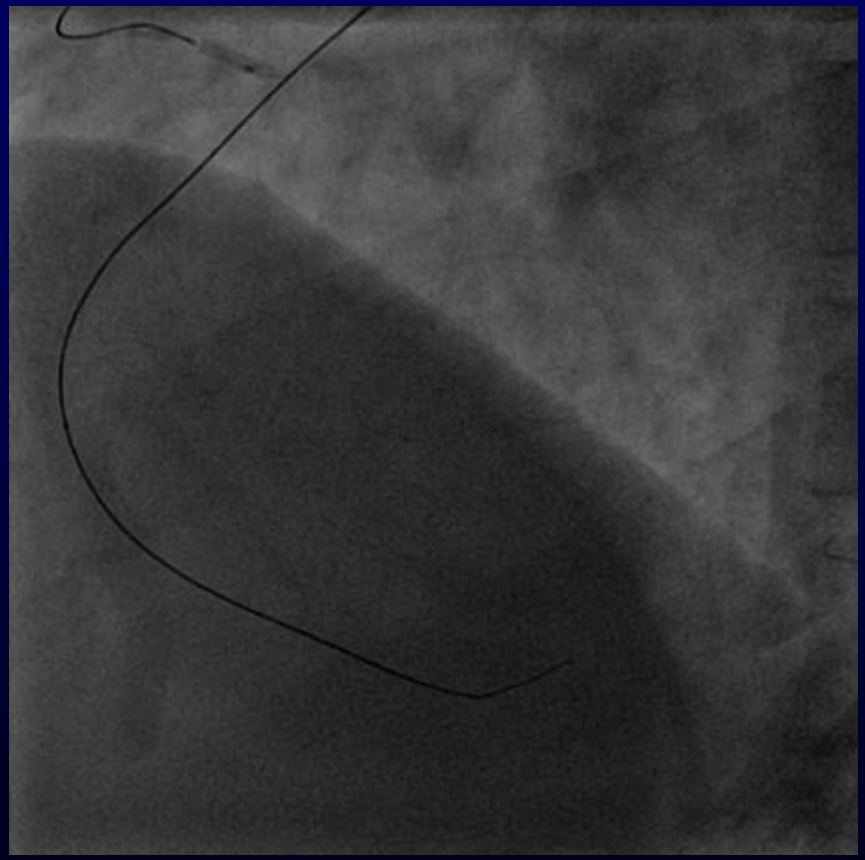


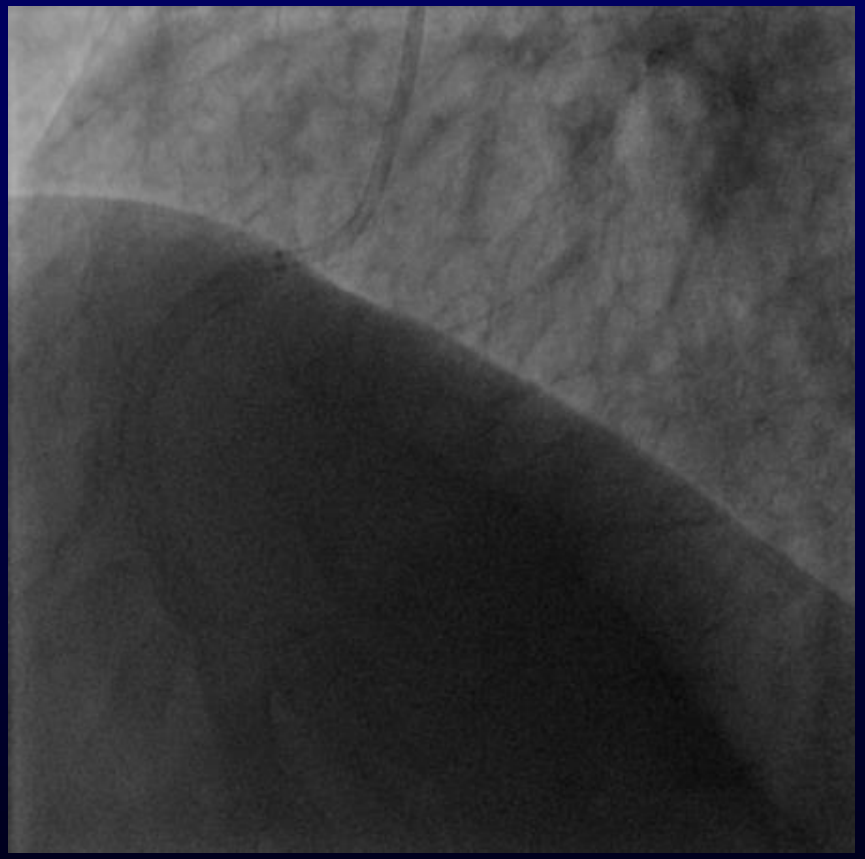




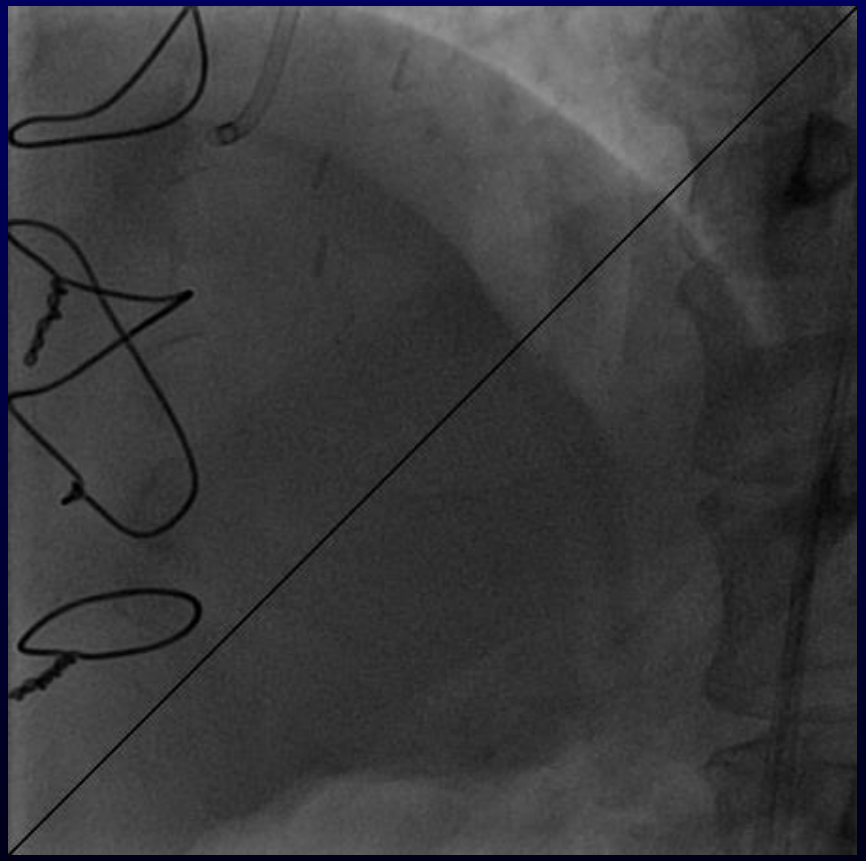


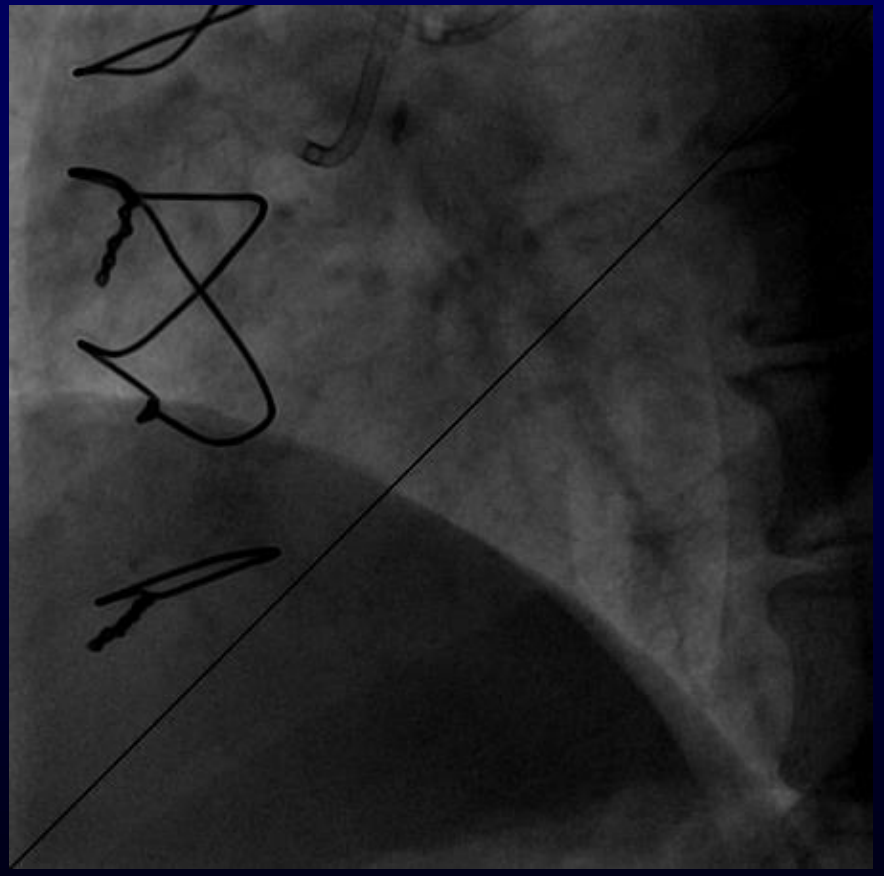


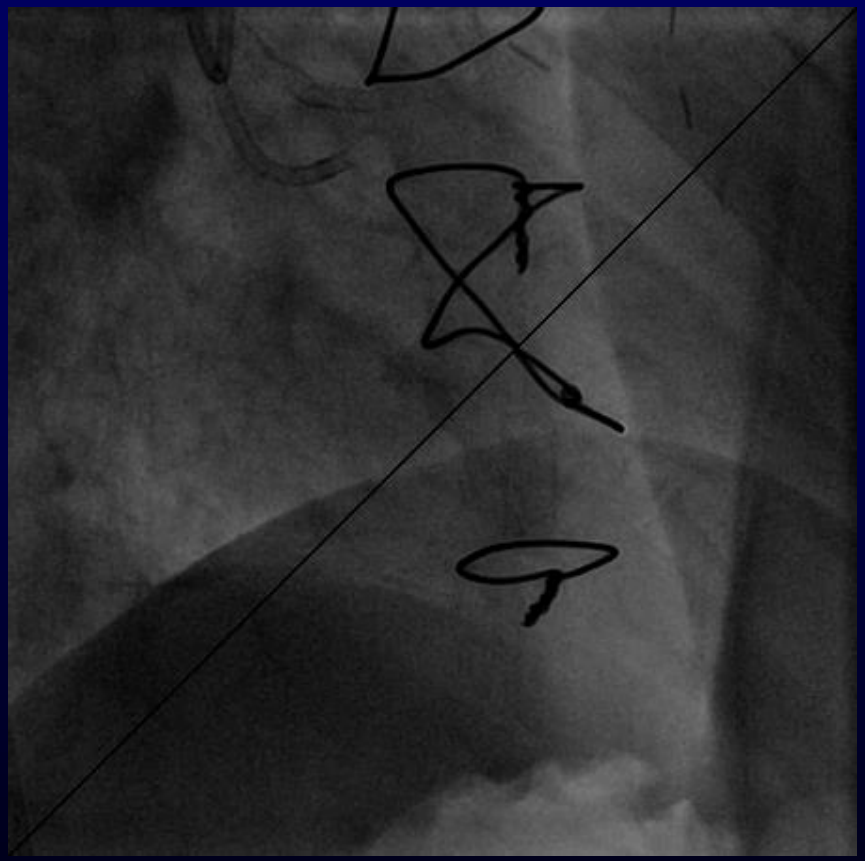


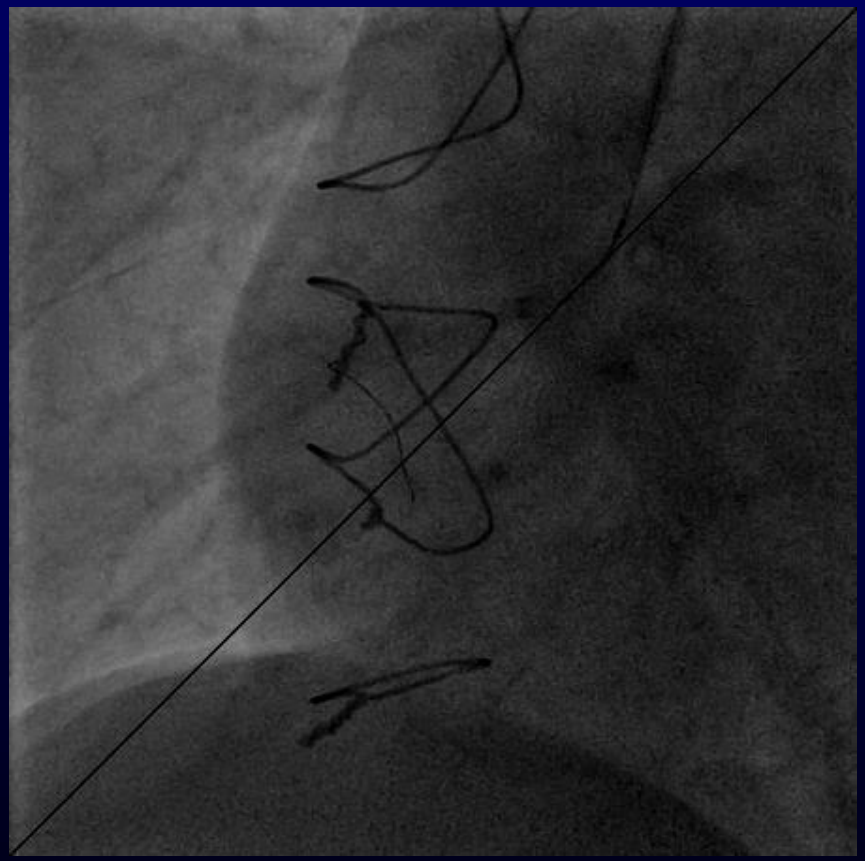


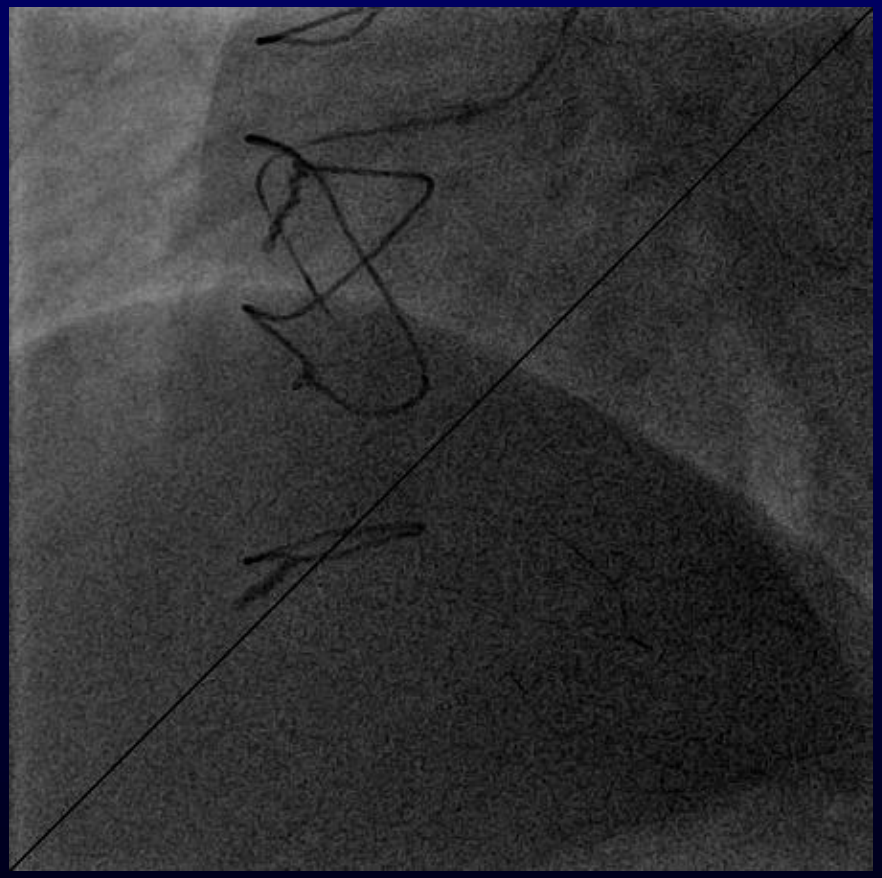
RCA retrograd

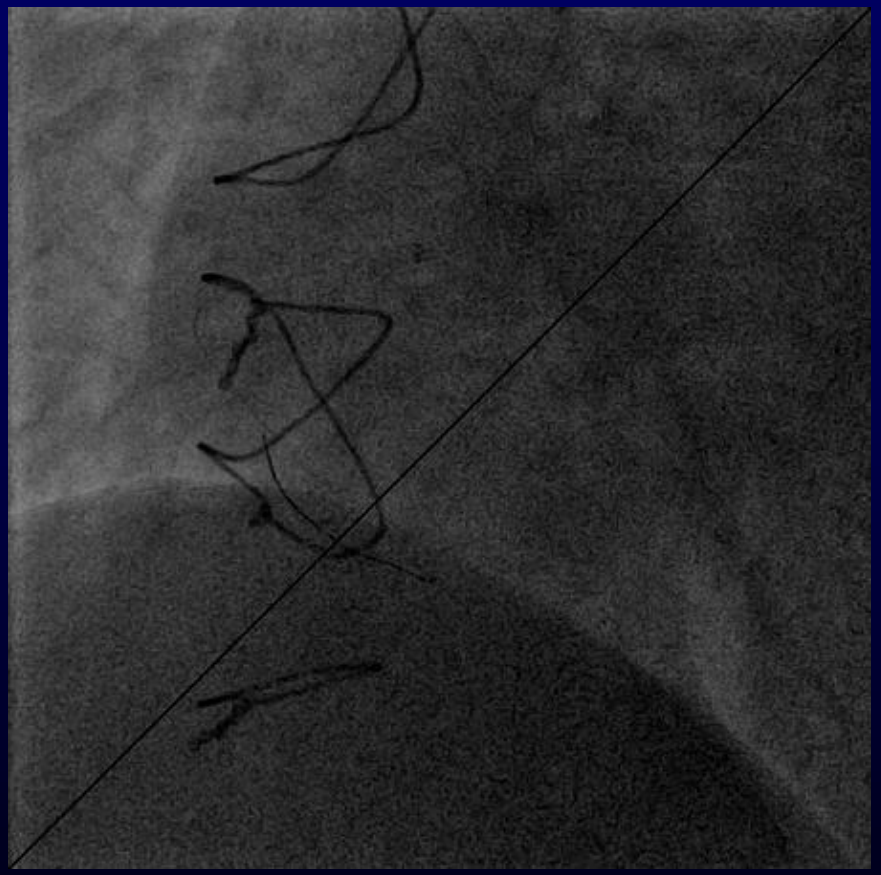


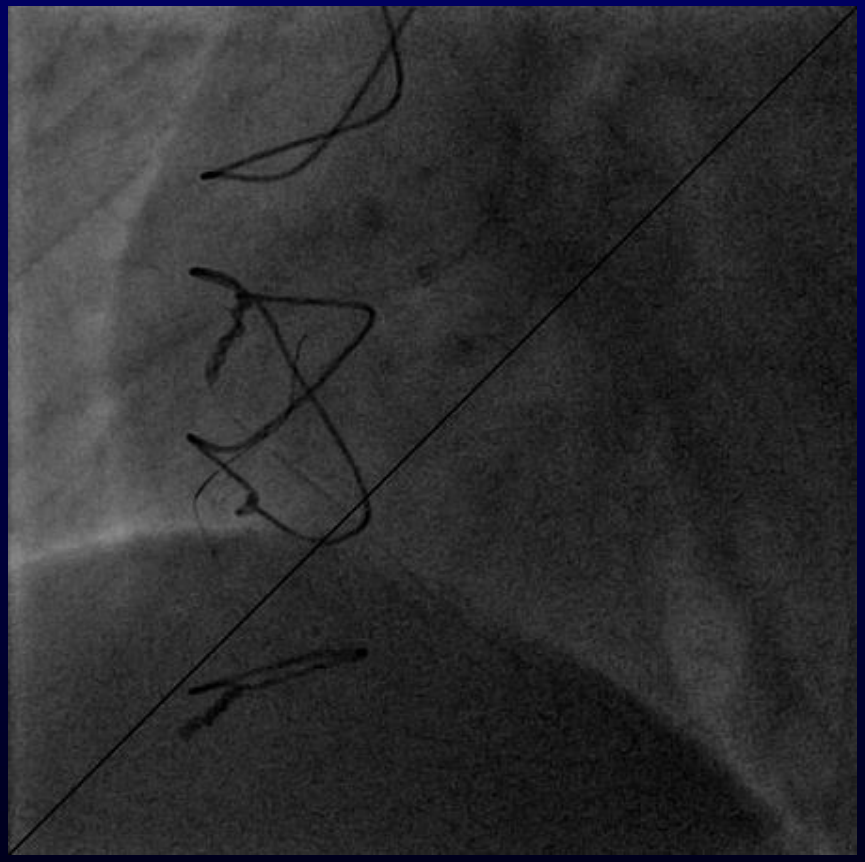


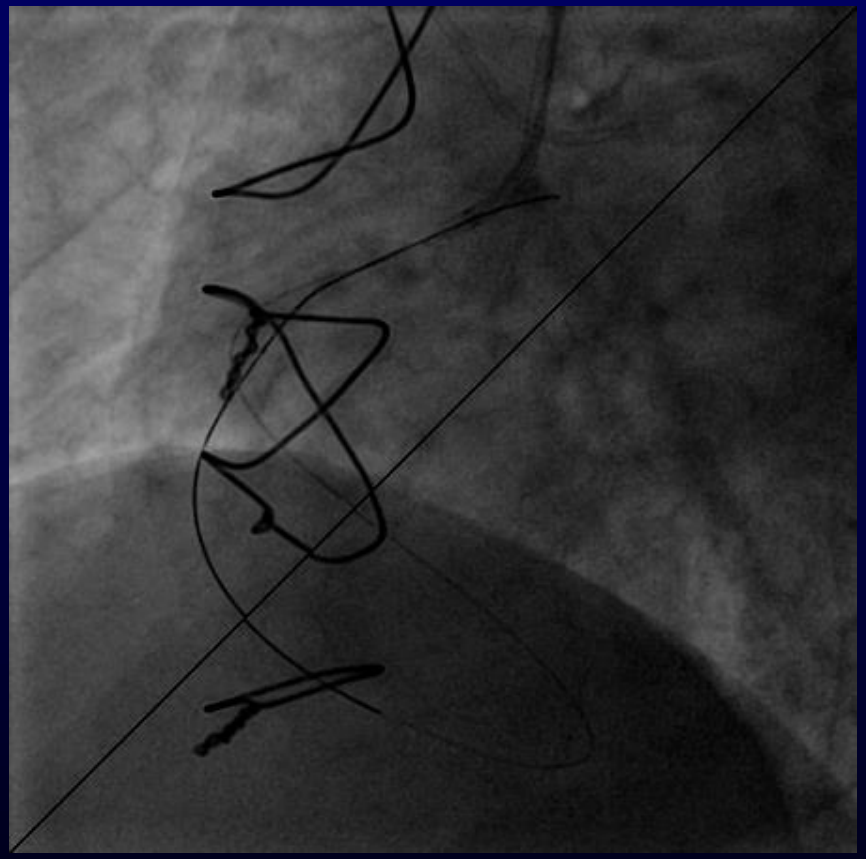


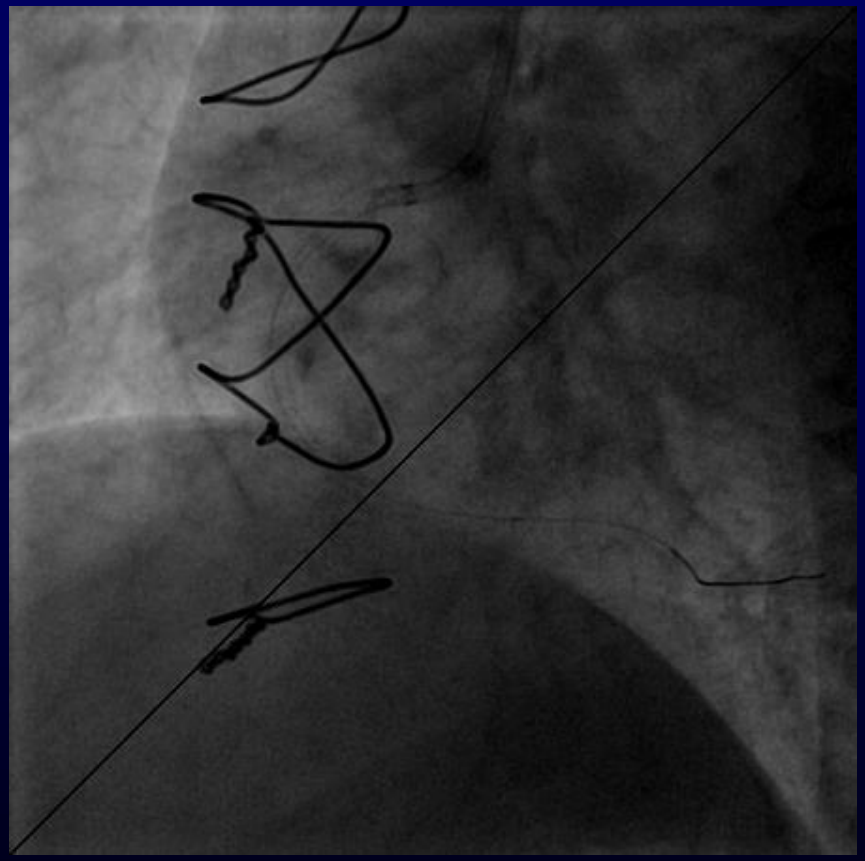




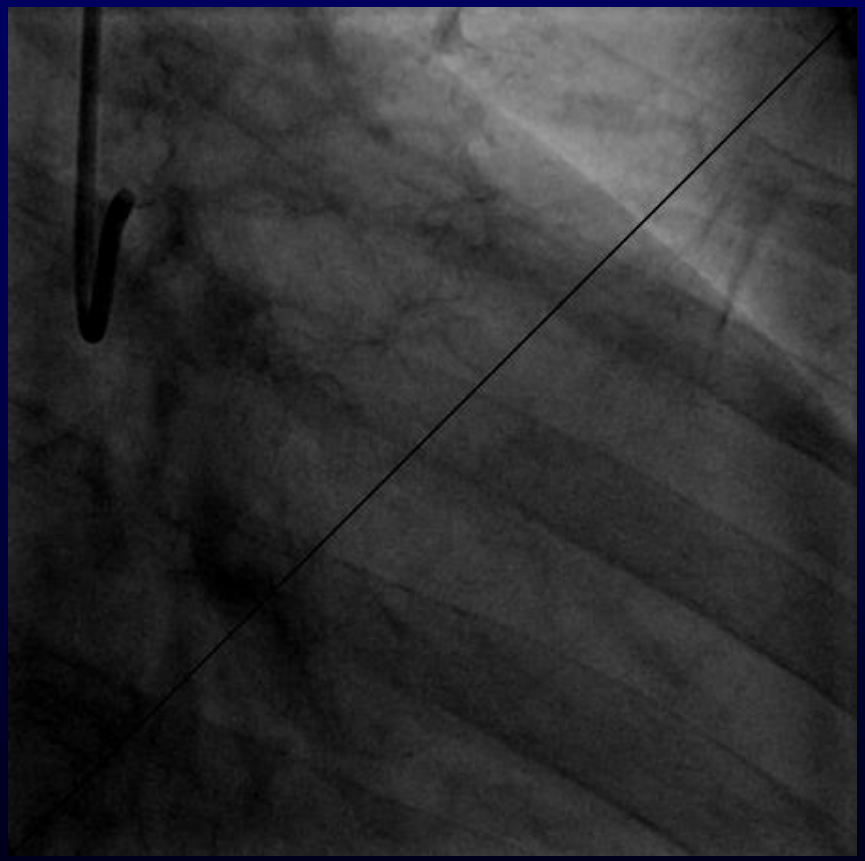


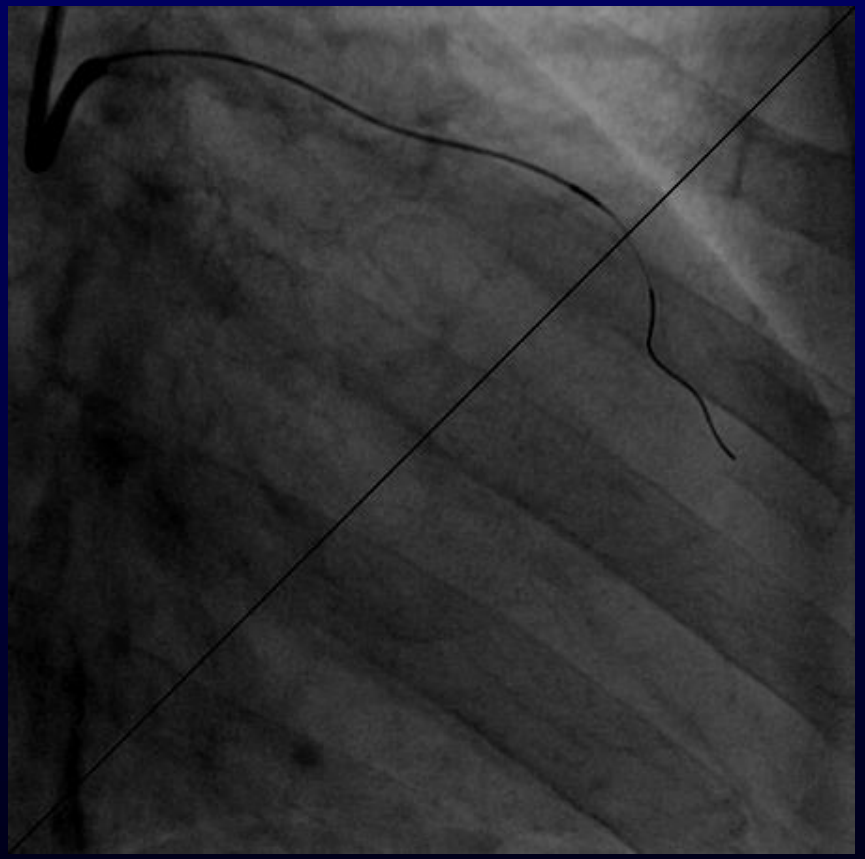


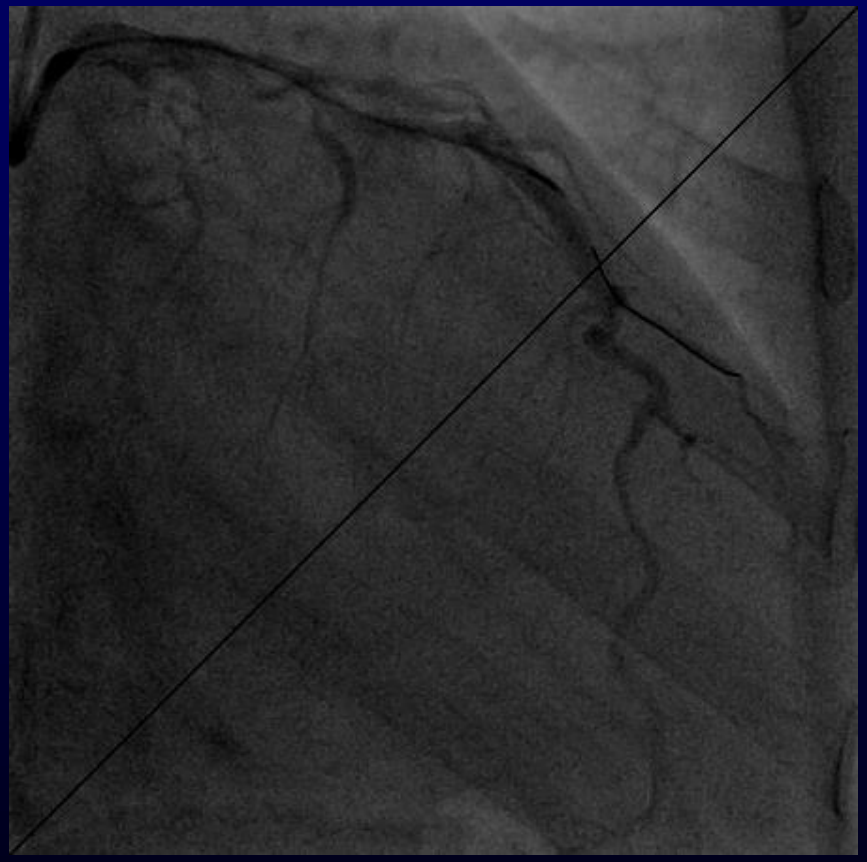


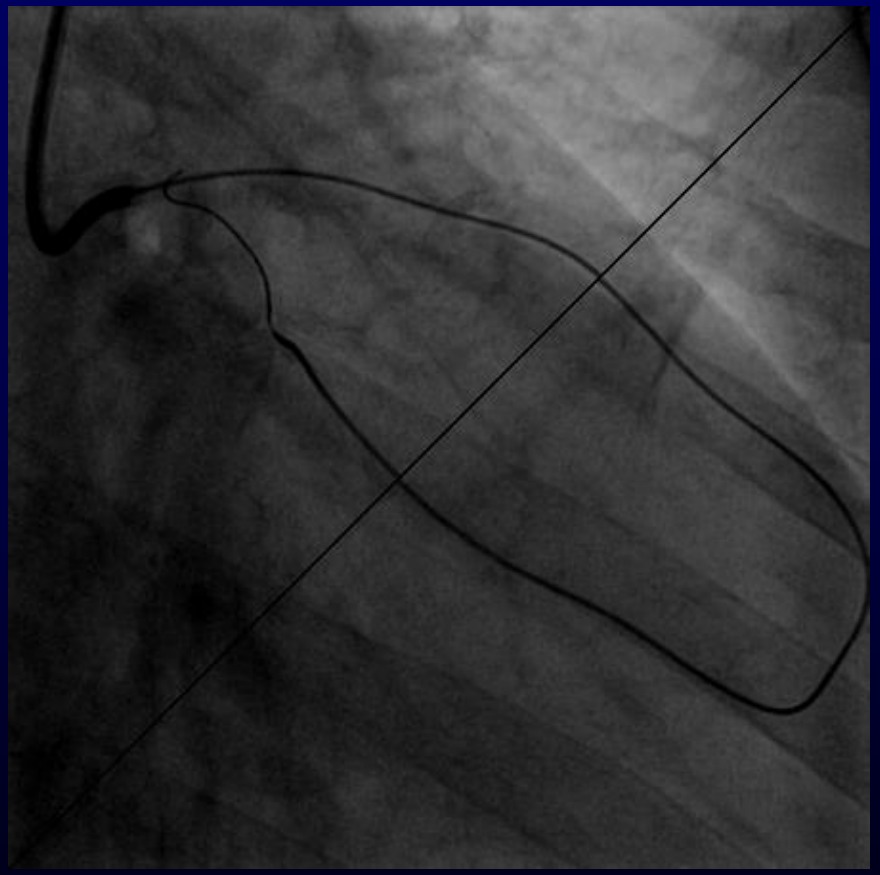


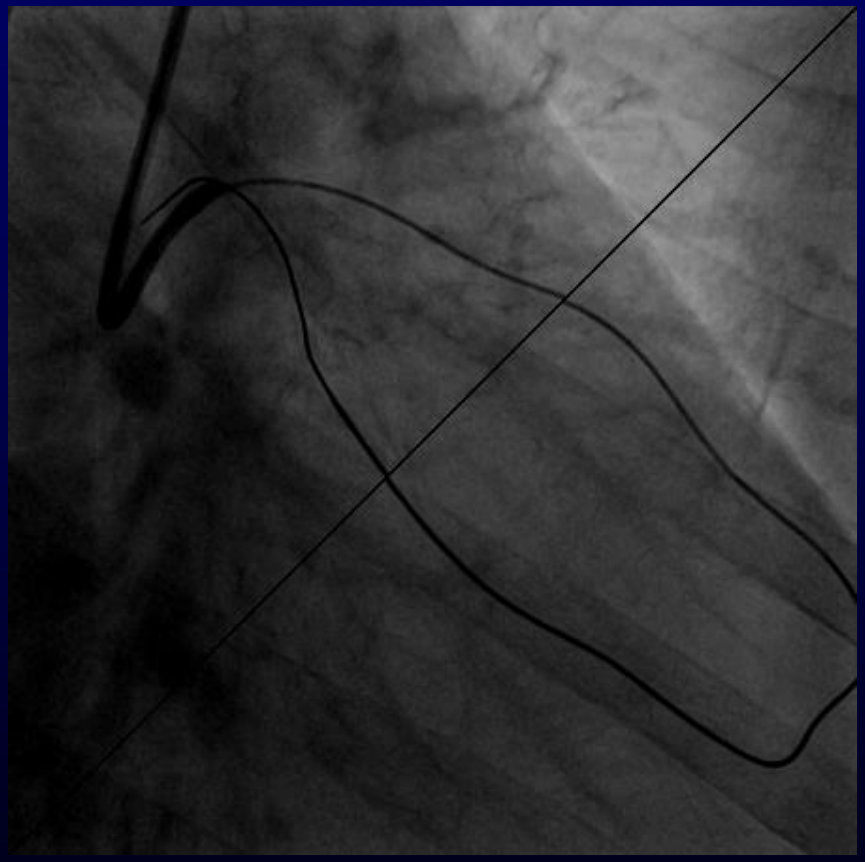
CX retrograd

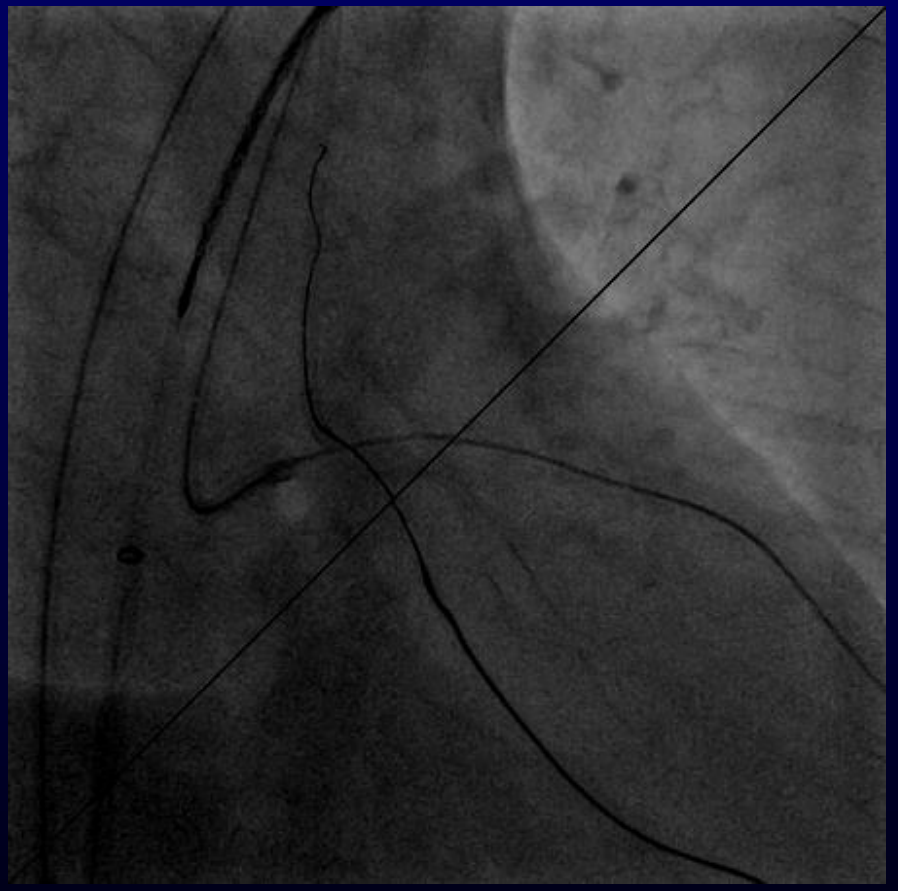


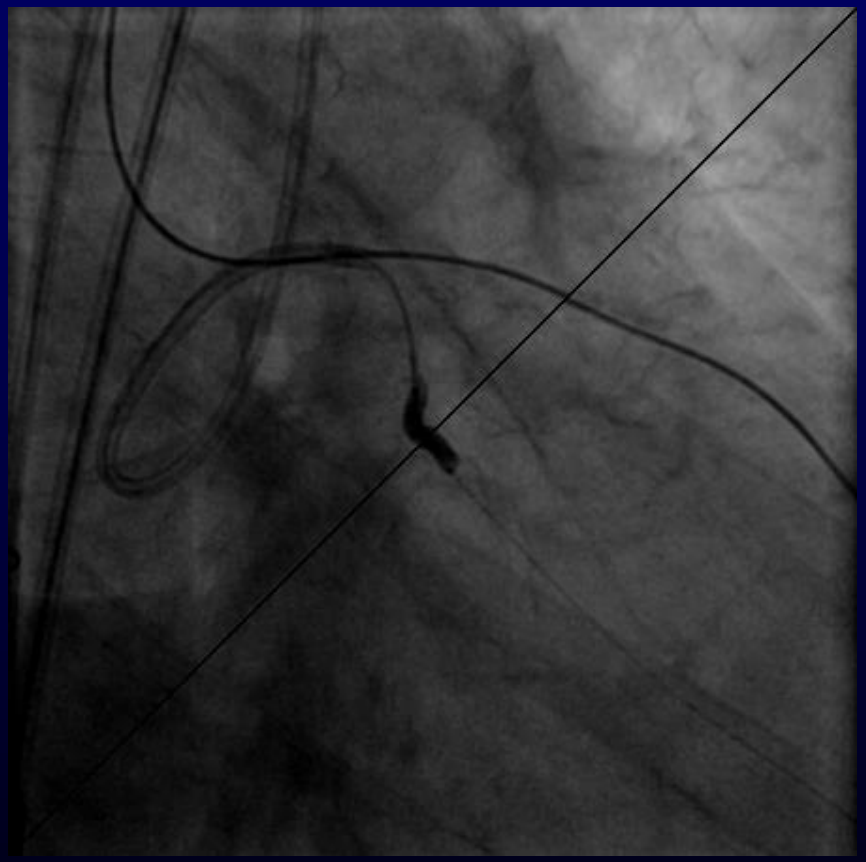


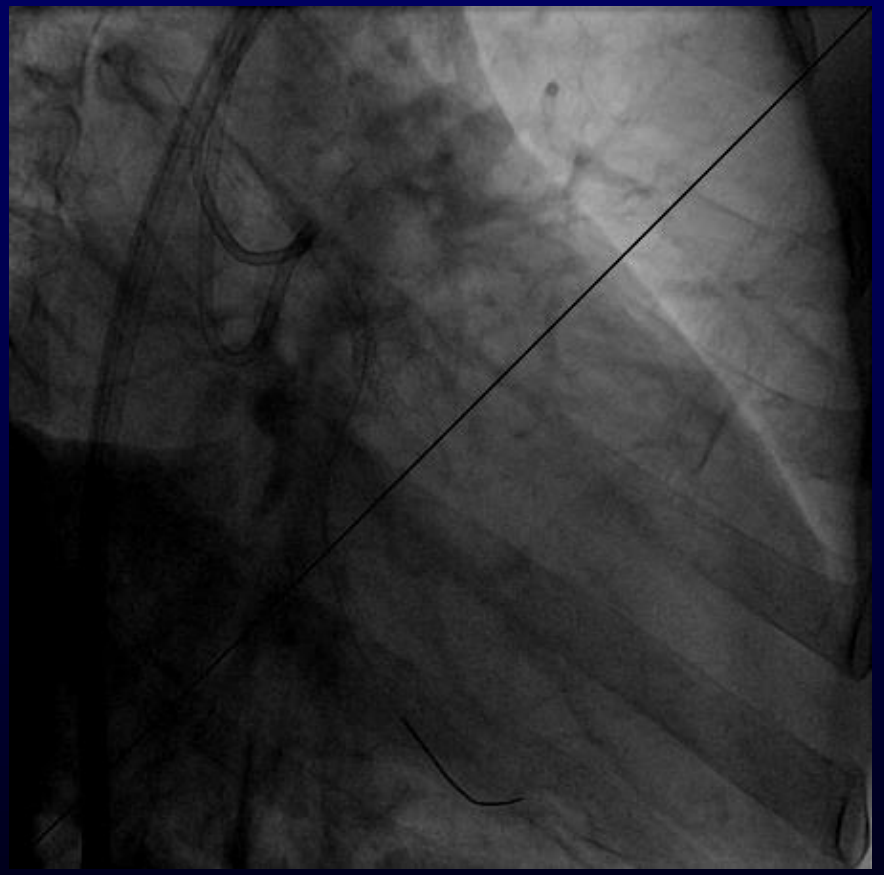




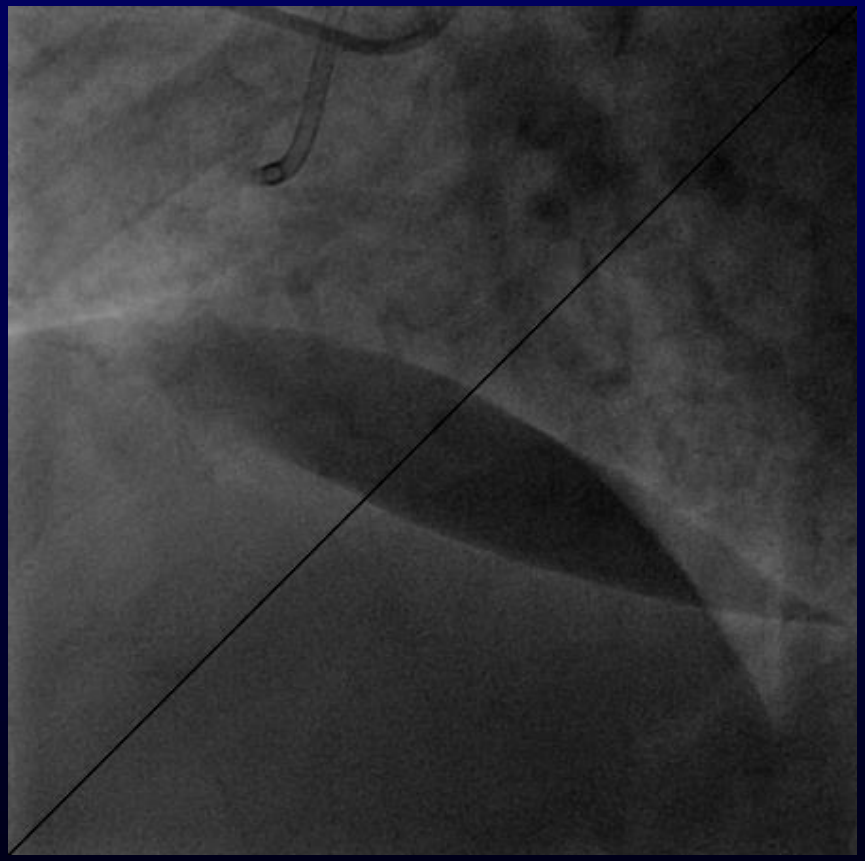


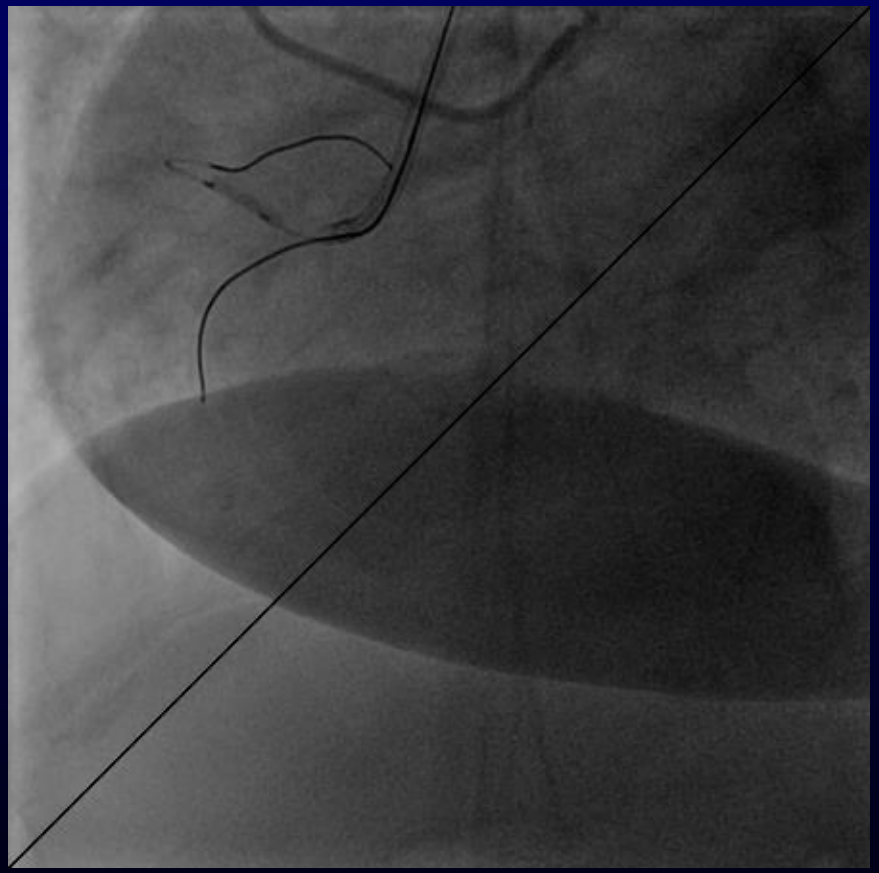


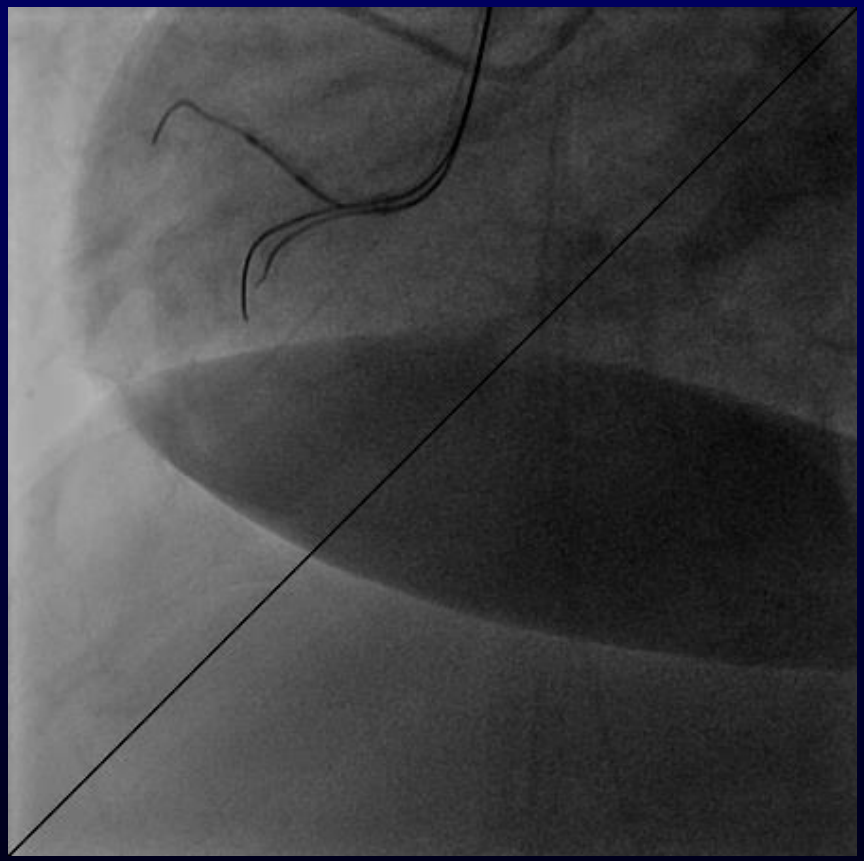


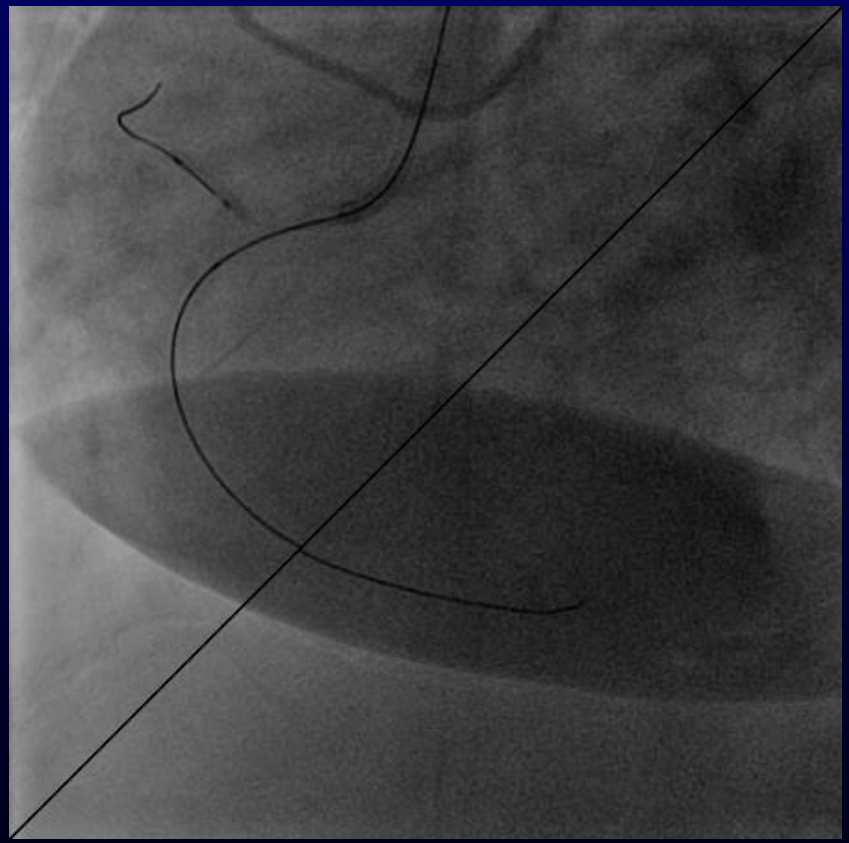


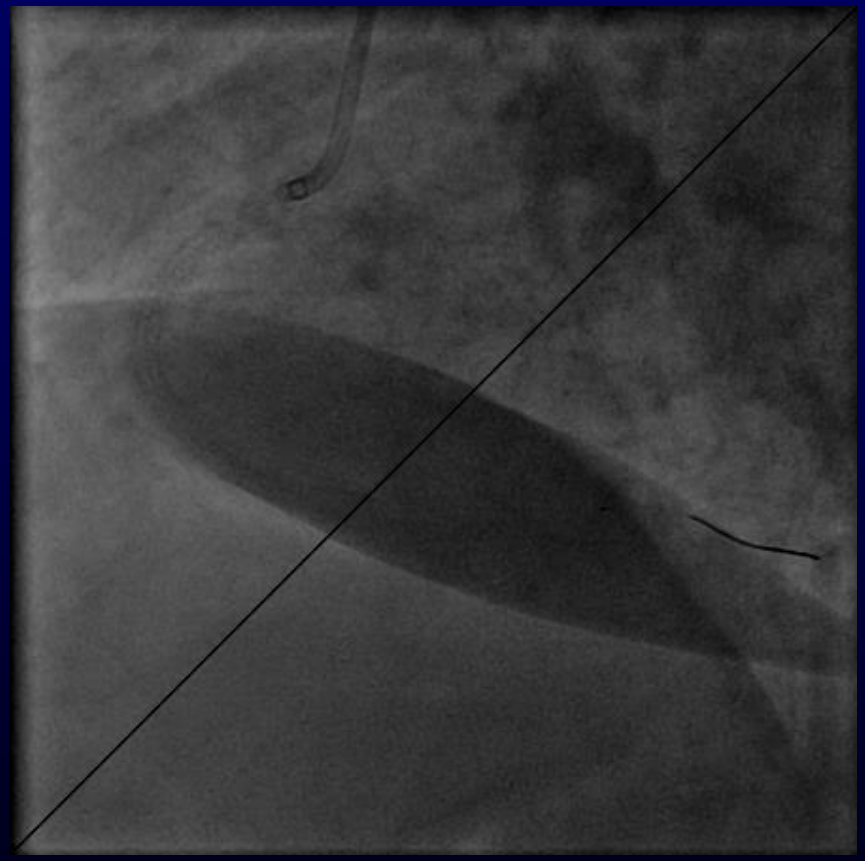
RCA antegrad



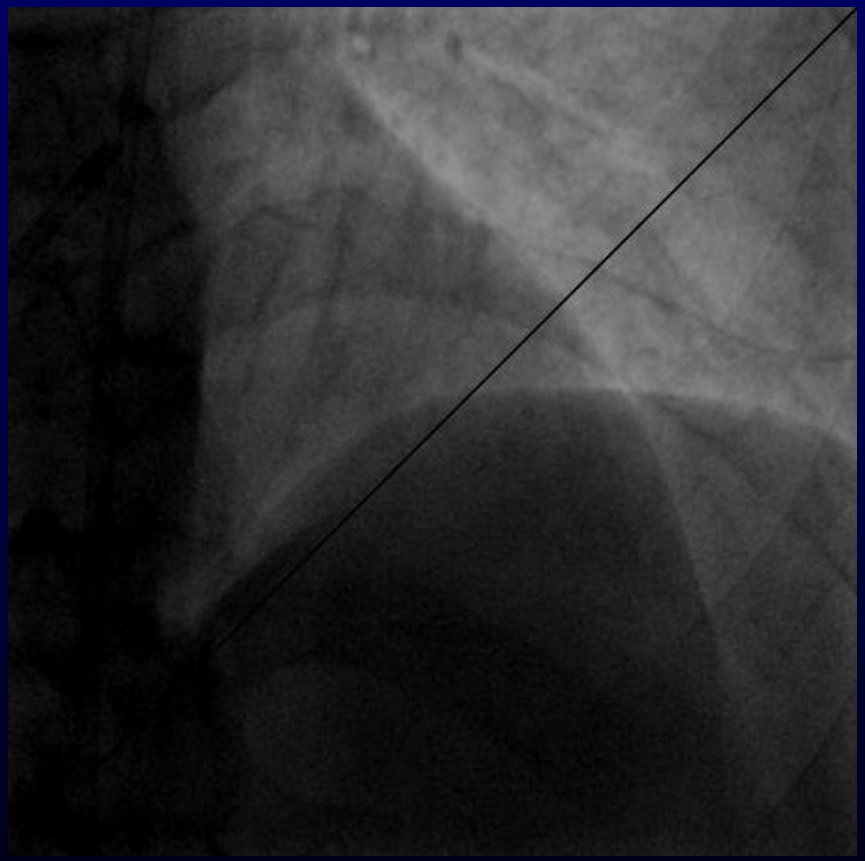


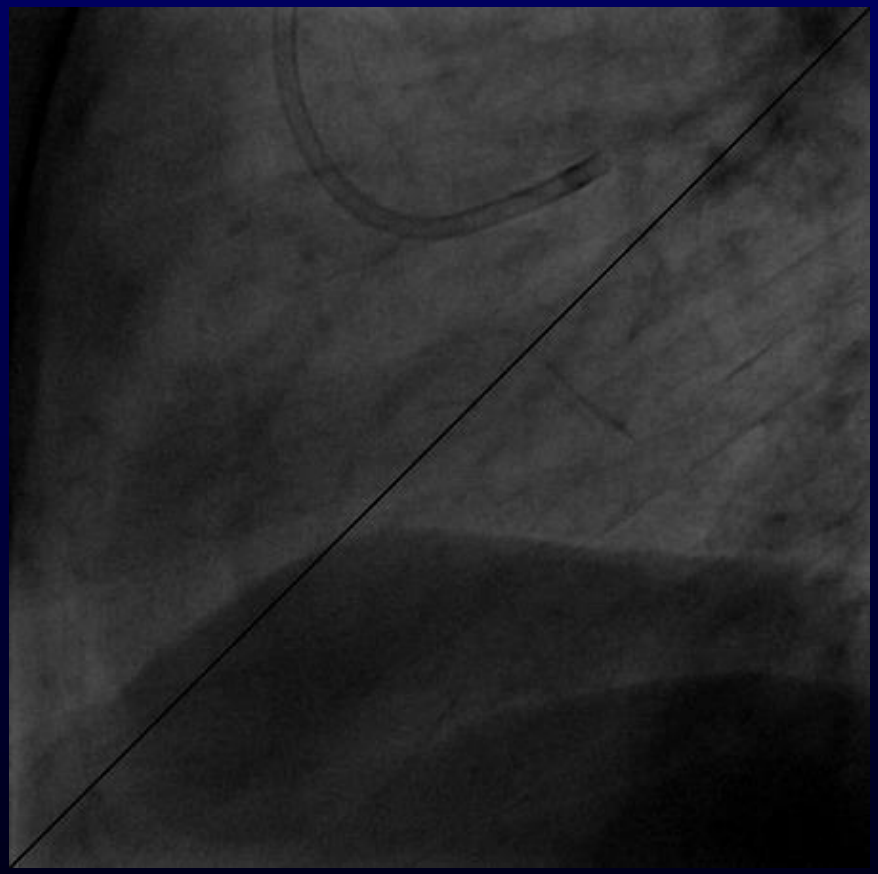


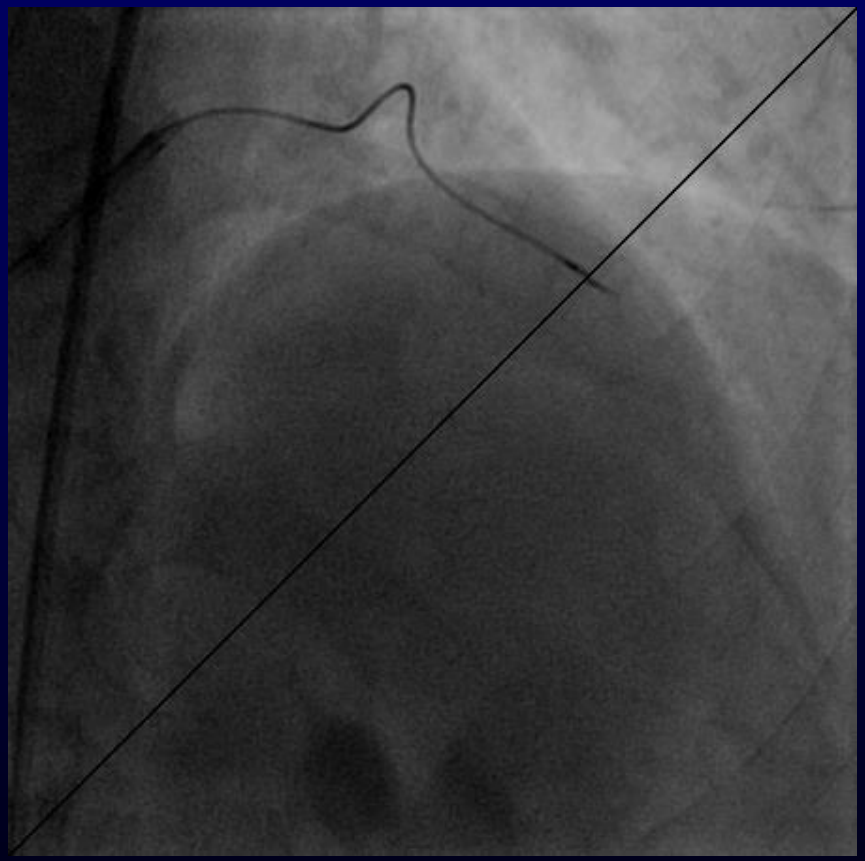


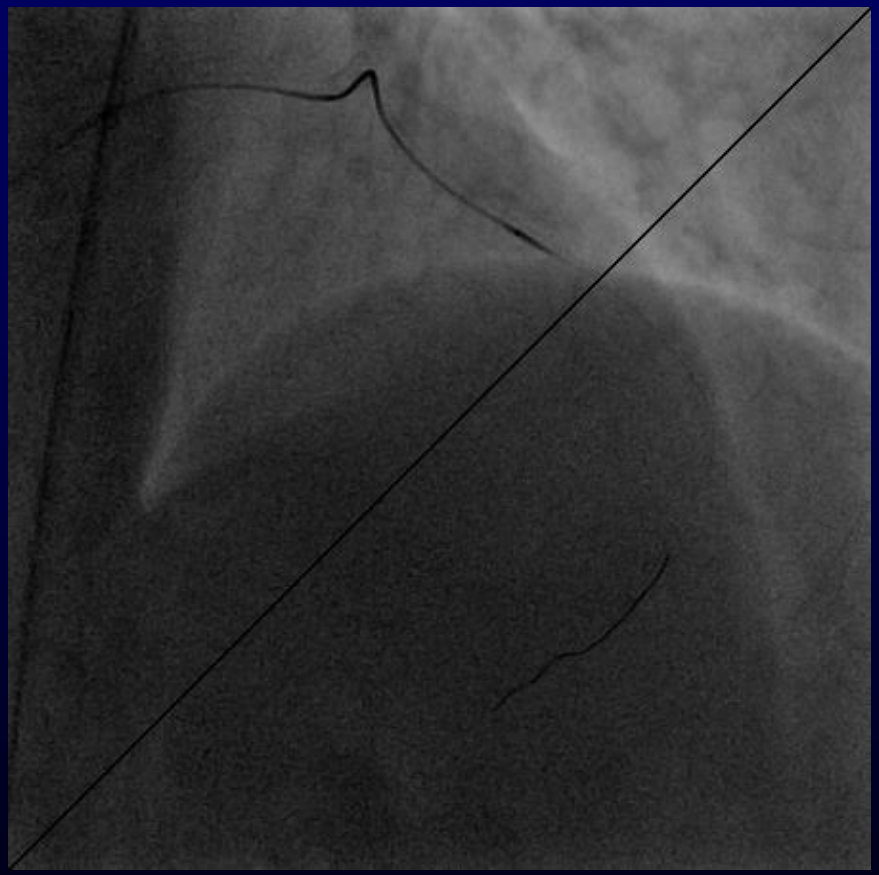


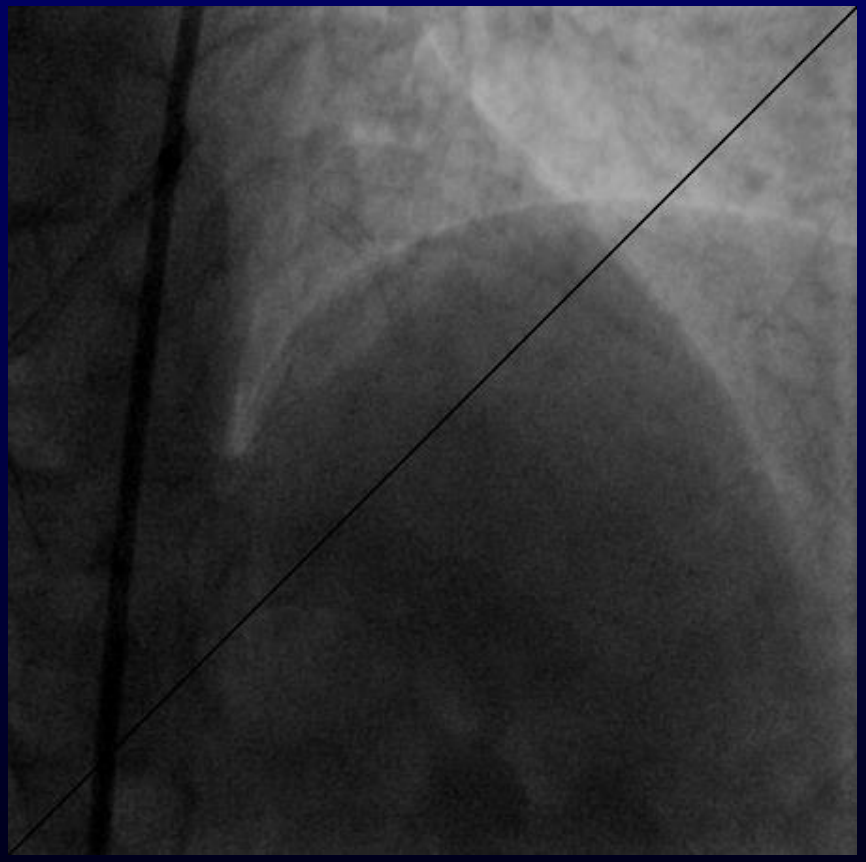
LAD antegrad

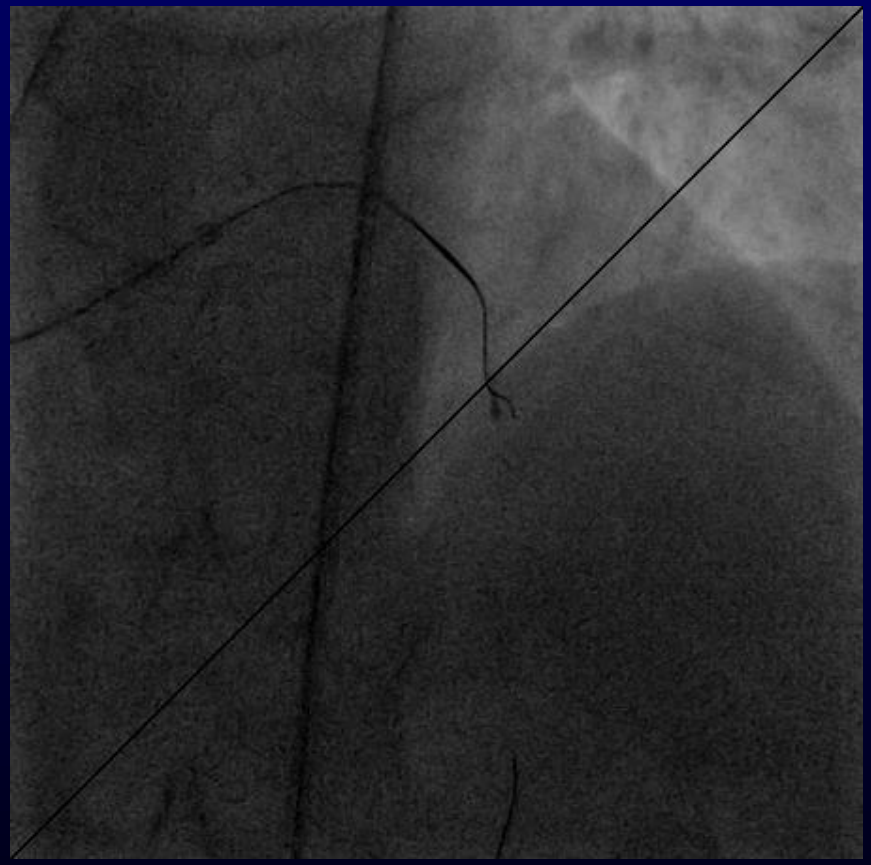


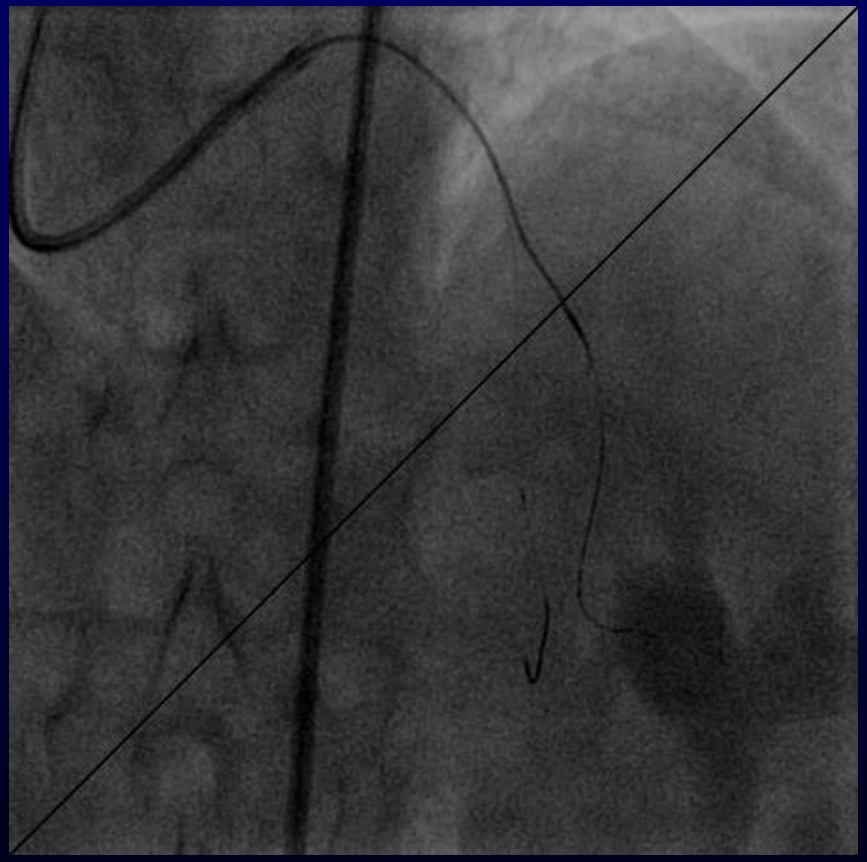


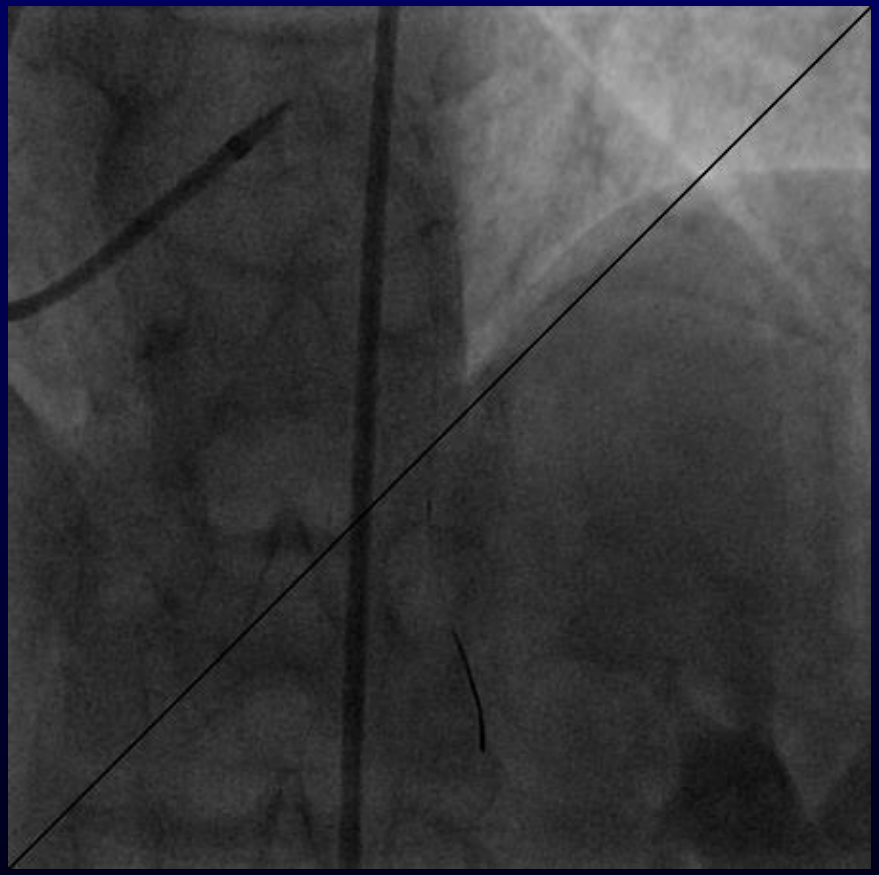




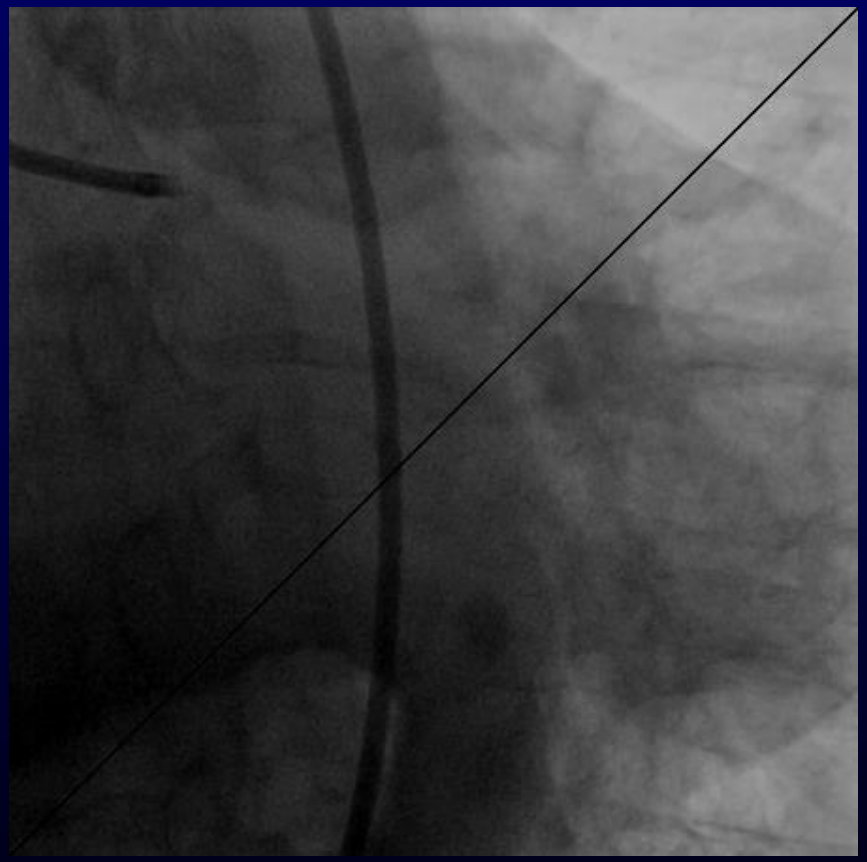


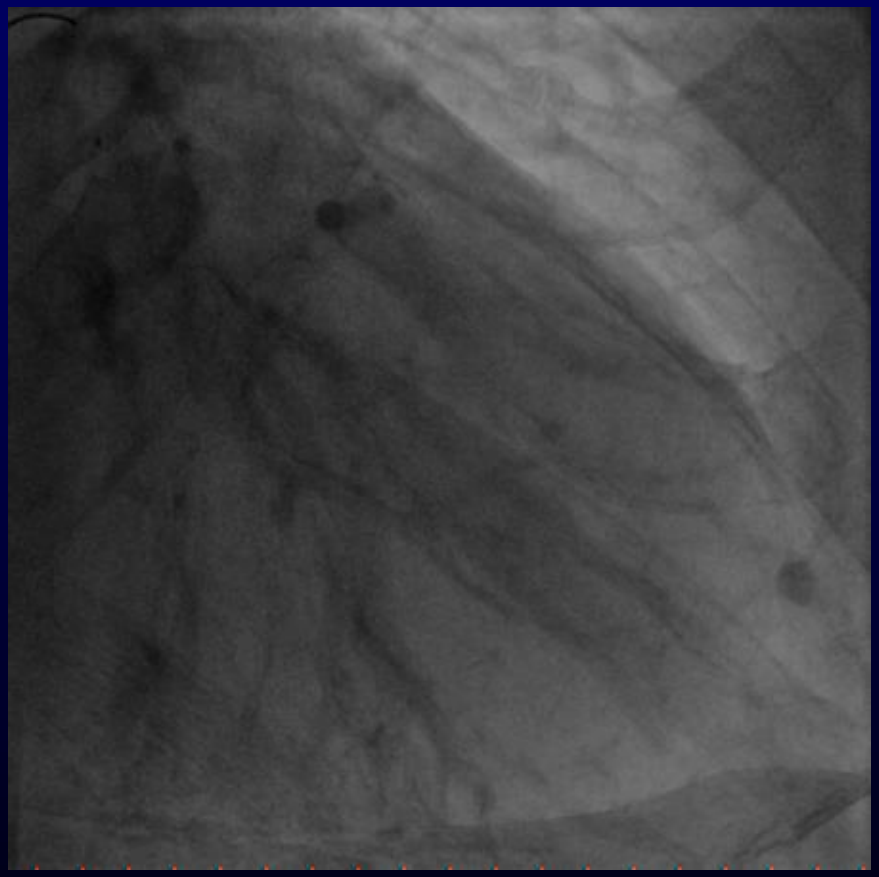


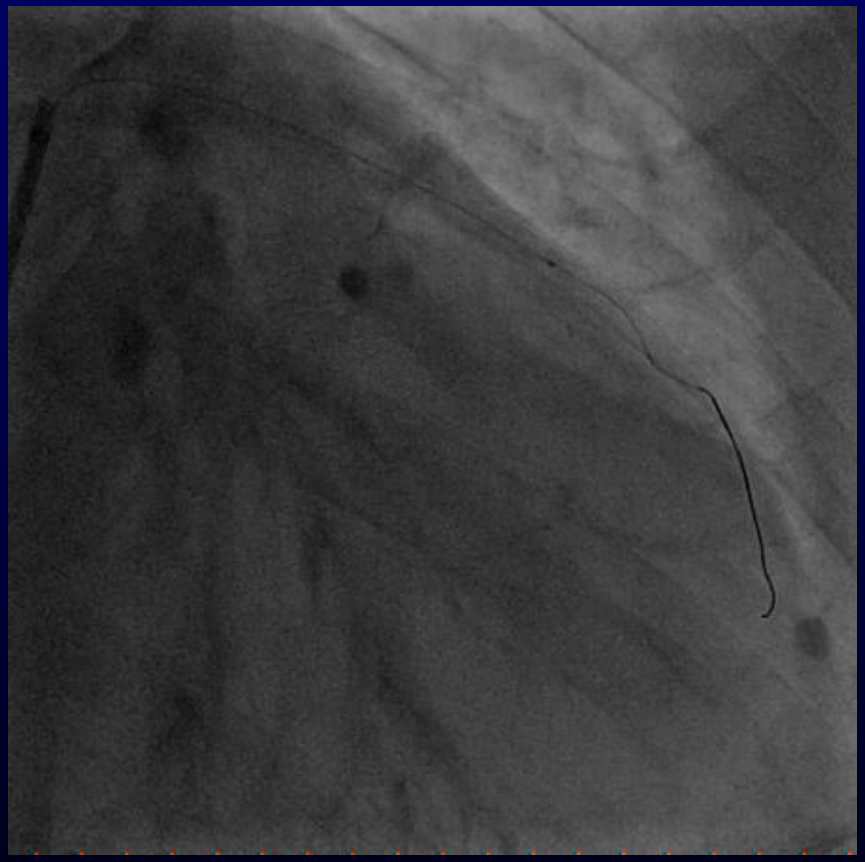


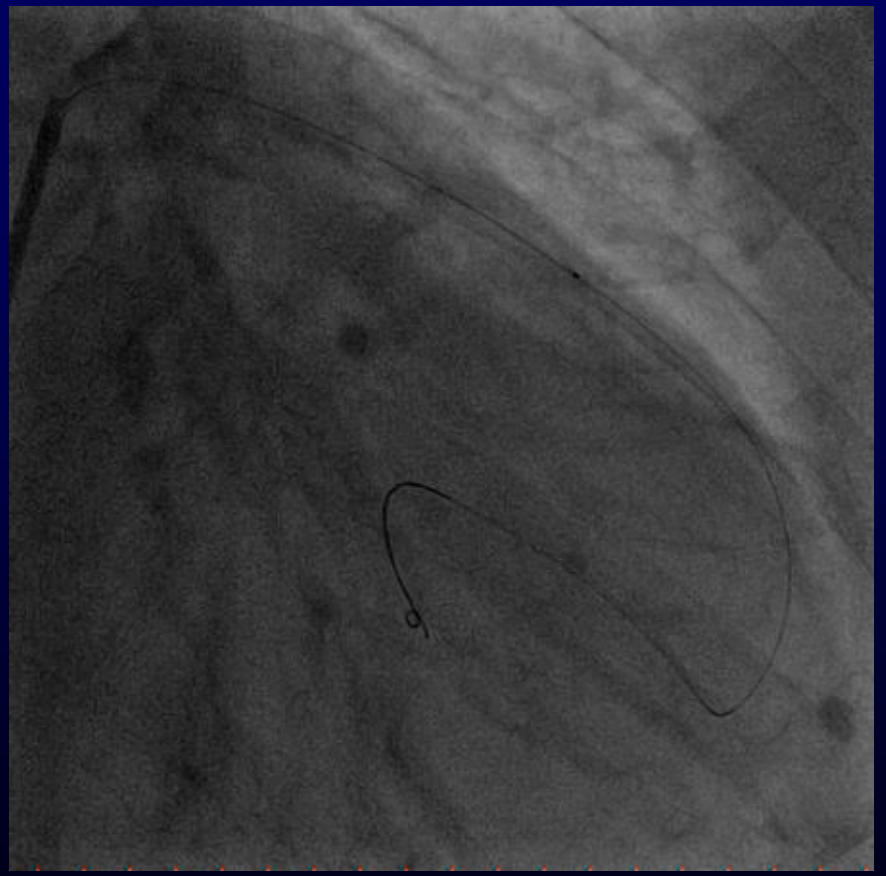


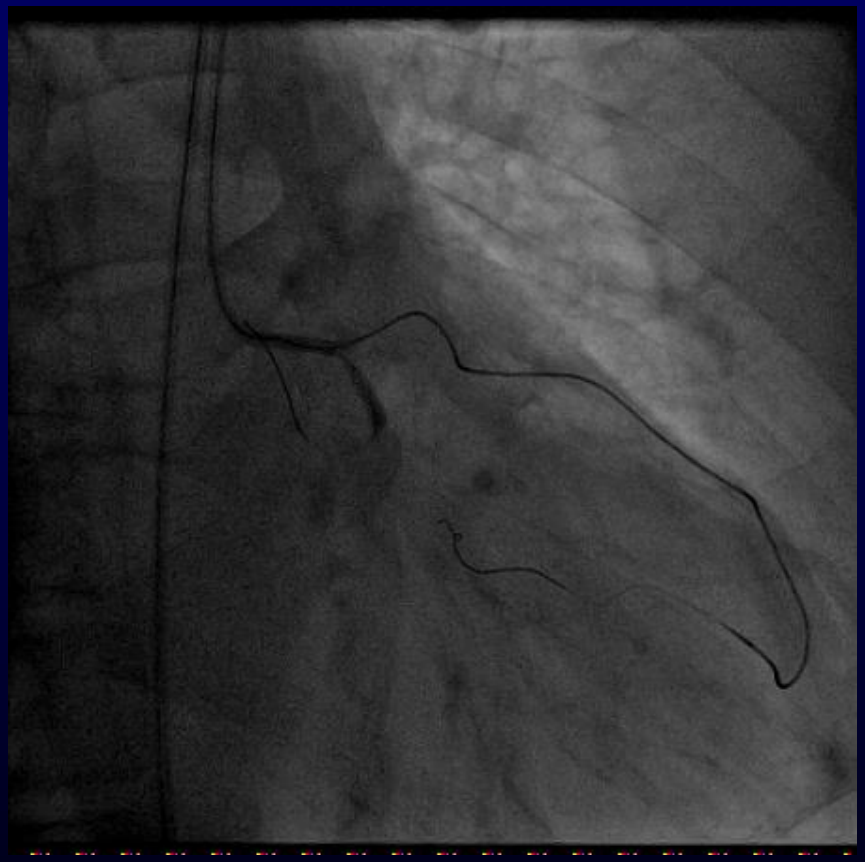
CX retrograd

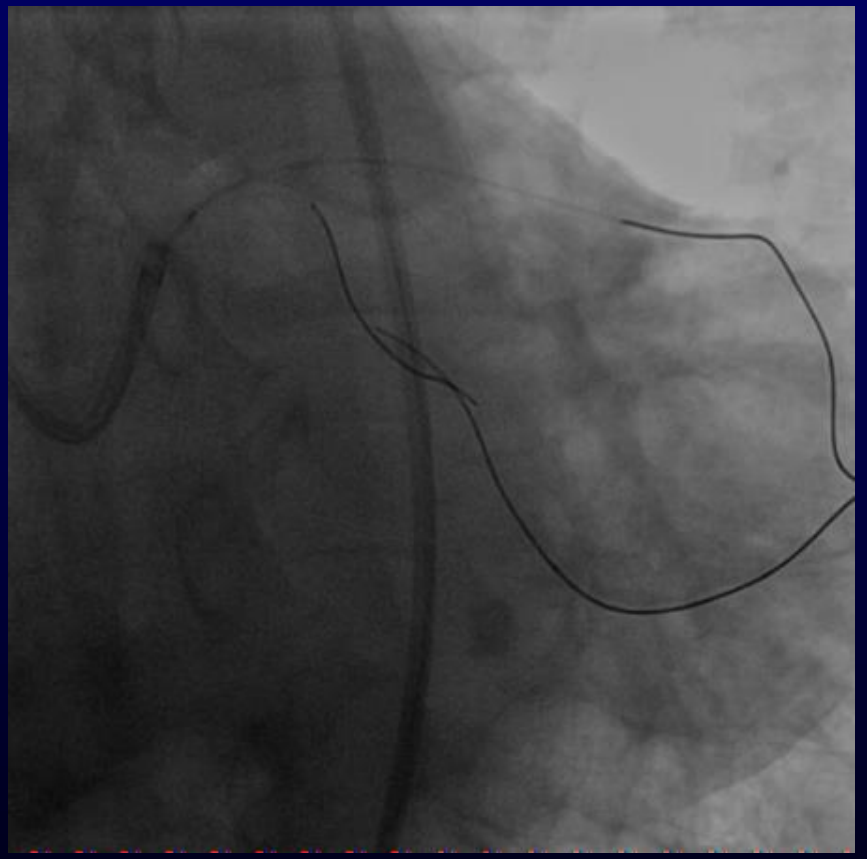


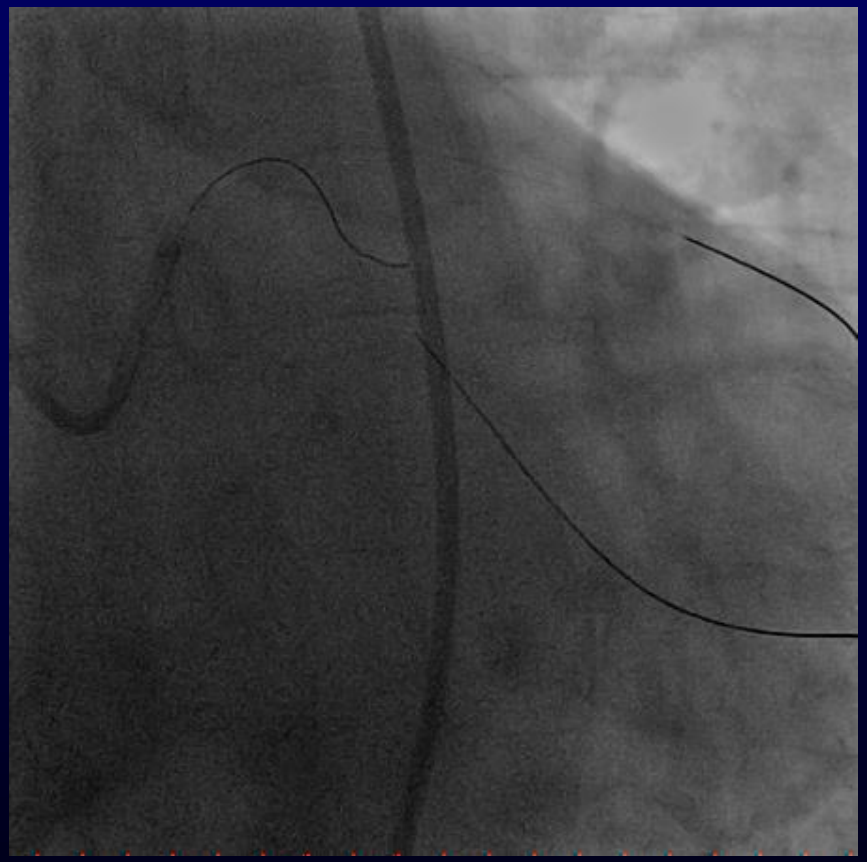


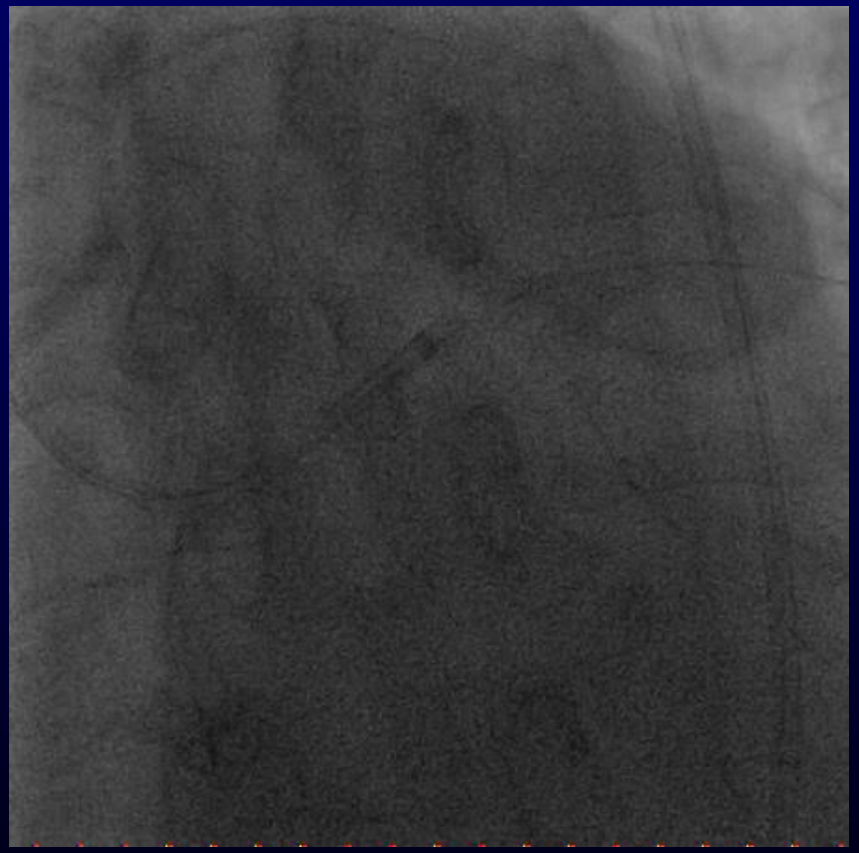


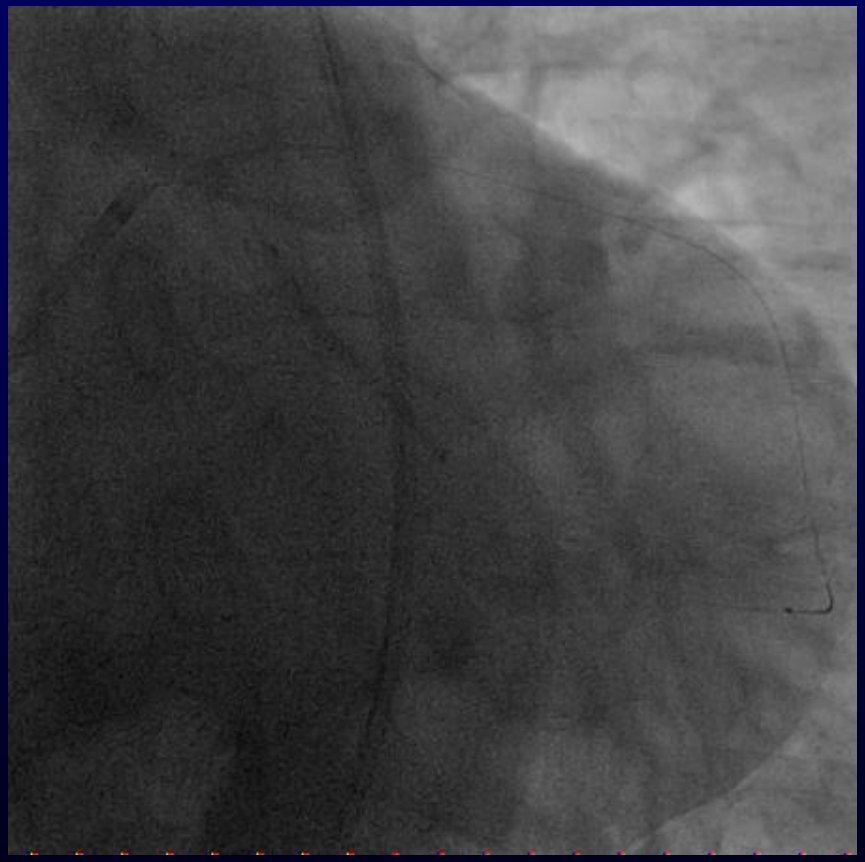


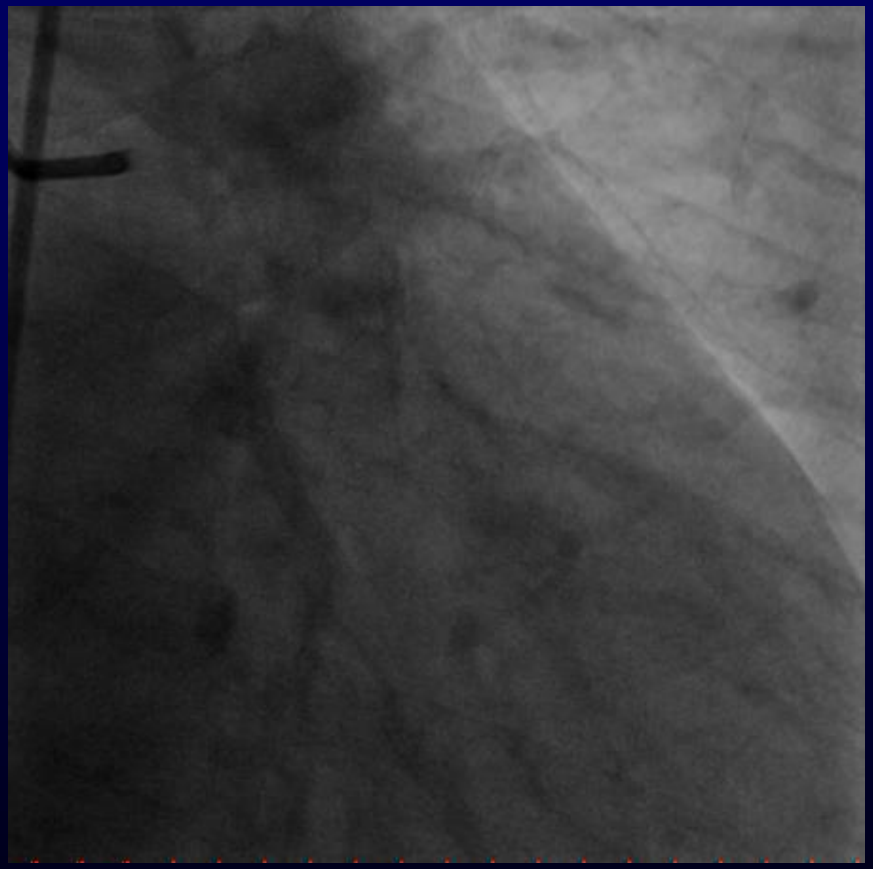


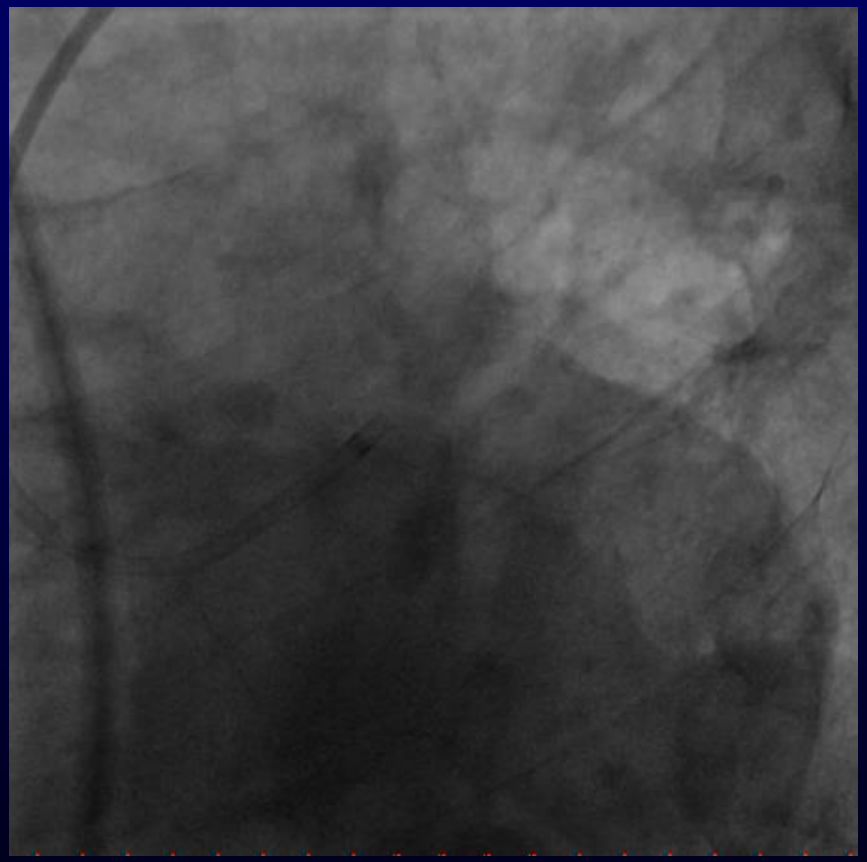












RCA retrograd