Ten Years Clinical Outcome of Yukon

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Khoa Nội Tim Mạch – BVĐK Kiên Giang

Yukon® Chrome PC

Sirolimus Eluting Coronary Stent System

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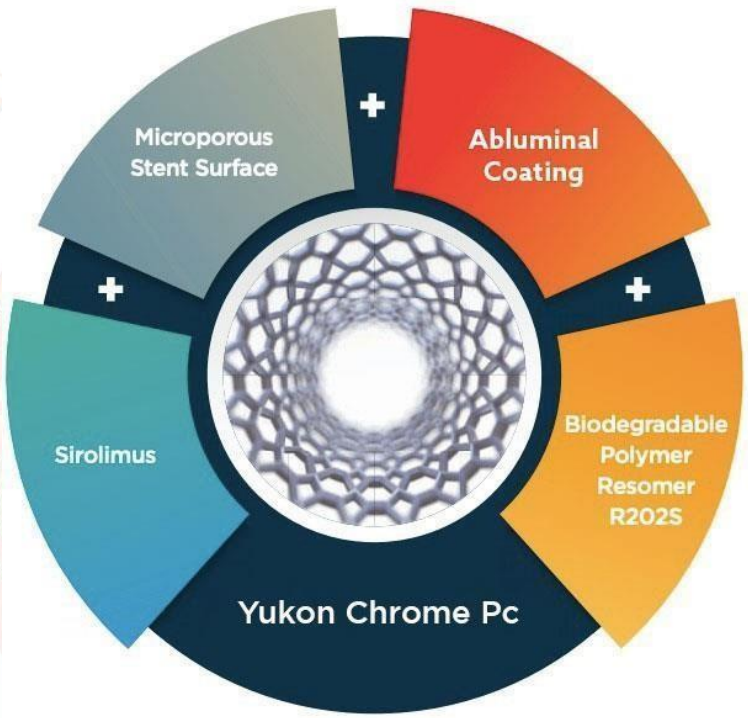
LIMITLESS POSSIBILITIES

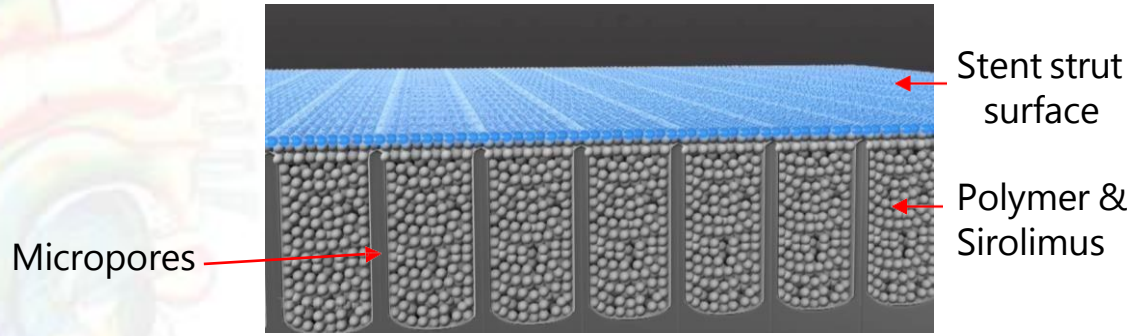


DES providing synergy of Biodegradable polymer with microporous surface to enhance optimal performance

Yukon® Chrome PC
Sirolimus Eluting Coronary Stent System

Surface Modification

- Yukon Chrome PC has micro-porous surface created by sandblasting - a special characteristic used to enhance drug delivery for longer duration.
- The micro-pores on its surface act like reservoirs for delivering the drug to the targeted site using van-der-walls forces to control the release-kinetics of the drug
- One million pores per cm^2 with average depth of 2 µm ensures optimum drug release with minimal use of polymer.
- Micro-pores reduce the polymer load by $1/4^{th}$ as compared to other DES



Structured surfaces in the micrometer scale show a better and faster reendothelialization when compared with flat surfaces.

Scanning Electron Microscope image of the unique Microporous surface

Palmaz et al., Journal of Vasc.Surg., 2002, 26, 2001-09

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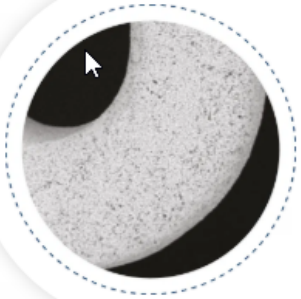
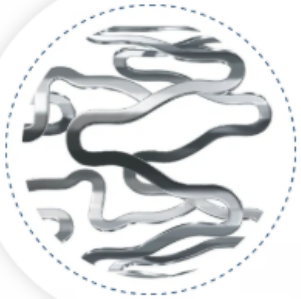
LIMITLESS POSSIBILITIES

Next Generation Biodegradable Polymer Technology



Microporous Surface (PEARL)

The PEARL surface, combined with a biodegradable polymer, enhances endothelialization, reduces restenosis and thrombosis, and ensures controlled drug release, delivering optimal performance as a safe and effective DES technology.



Next-Generation Design

- CoCr platform with thin 68 µm struts for enhanced flexibility and deliverability.
- 2-connector design ensures excellent side-branch access for bifurcation stenting.

Abluminal Coating

Facilitates unidirectional drug release and less systemic exposure, ensuring improved healing & faster endothelialization.

https://translumina.com/products/drug-eluting-stents/yukon-chrome-pc/

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LIMITLESS POSSIBILITIES

10 YEARS CLINICAL DATA OF EFFICACY & SAFETY

2004
CATHETERIZATION CARDIOVASCULAR INTERVENTIONS 89:367–374 (2017)

At 2 years, microporous surface was found to be equally safe as compared to electropolished surface. Rough surfaces showed lesser restenosis rates.

2008
Biomaterials

In Pre-clinical trial, it was seen that **Yukon Choice PC** with microporous surface reduced the amount of polymeric load to 1/4th and is assured with consistent kinetics & low inflammation.

2011
JACC

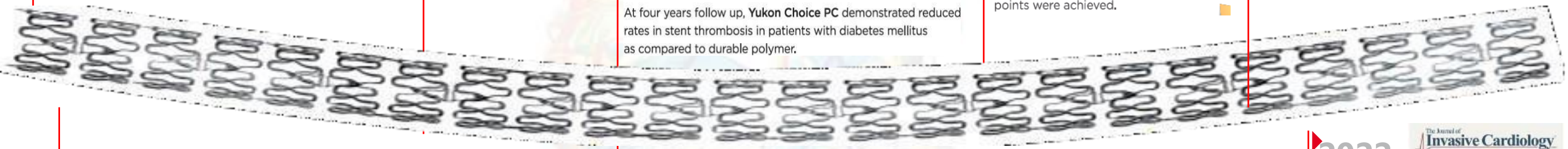
At 3 years, **Yukon Choice PC** proved equivalance to Xience in terms of Late loss, TLR and Primary Composite MACE.

2012
European Heart Journal

At four years follow up, **Yukon Choice PC** shows reduction of risk by 50% in Definite Stent Thrombosis & by 78% in Very Late stent thrombosis as compared to the first generation DES with similar efficacy.

2013
International Journal of CARDIOLOGY

At four years follow up, **Yukon Choice PC** demonstrated reduced rates in stent thrombosis in patients with diabetes mellitus as compared to durable polymer.



2014
EuroIntervention

Yukon Choice PC showed equivalent efficacy & better safety in terms of stent thrombosis compared to Xience & Cypher at 5 years follow up.

2018
ESC European Society of Cardiology

Yukon Choice PC is recommended by ESC guidelines 2018 on the basis of large randomized trials where primary end points were achieved.

2018
Circulation

At 10 years, **Yukon Choice PC** showed equivalence in terms of MACE rate, Mortality and TLR rate compared to Xience and a superiority over Cypher for the same outcomes.

Yukon Choice PC showed the lowest rate of definite or probable stent thrombosis with a significant risk reduction than the Cypher stent (50% reduction) and a numerically lower rate as than the 'Xience' stent (29% reduction).

2021
American Heart Association

Ten-Year Clinical Outcomes of Biodegradable Versus Durable Polymer New-Generation Drug-Eluting Stent in Patients With Coronary Artery Disease With and Without Diabetes Mellitus

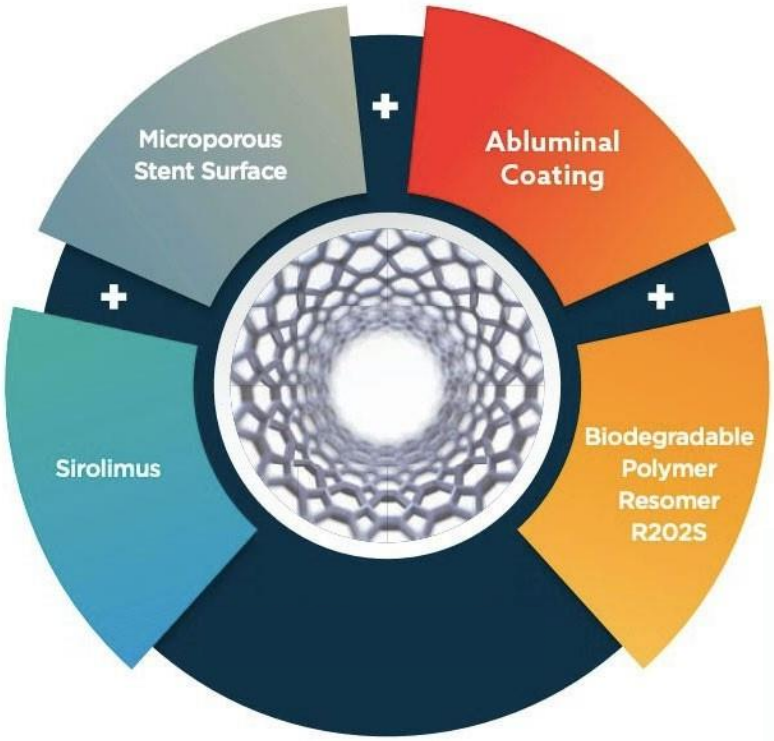
2022
The Journal of Invasive Cardiology

At 10 years, **Yukon** as compared with PP-DES demonstrated a lower DOCE frequency in ACS patient subset

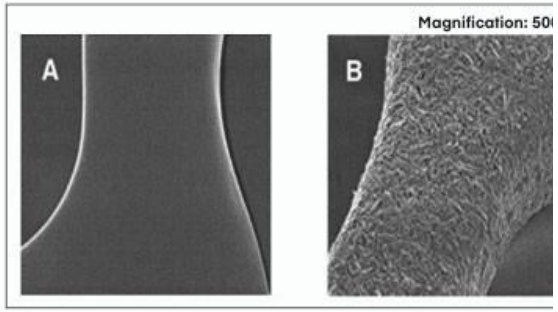
CE APPROVED

Yukon® Choice PC
Sirolimus Eluting Coronary Stent System

Yukon® Chrome PC
Sirolimus Eluting Coronary Stent System



Scanning Electron Microscope image of the unique Microporous Surface (PEARL)



A. Smooth (Electropolished) Stent Surface

B. Rough (Microporous) Stent Surface

10 YEARS CLINICAL DATA OF SAFETY & EFFICACY

The first 2nd gen. DES with 10 years of clinical data worldwide

Ten-Year Clinical Outcomes of Biodegradable Versus Durable Polymer New-Generation Drug-Eluting Stent in Patients With Coronary Artery Disease With and Without Diabetes Mellitus

Tobias Lenz, MD*; Tobias Koch, MD*; Michael Joner, MD; Erion Xhepa, PhD; Jens Wiebe, MD; J. J. Coughlan, MB, BCh; Alp Aytekin, MD; Tareq Ibrahim, MD; Massimiliano Fusaro, MD; Salvatore Cassese, MD, PhD; Karl-Ludwig Laugwitz, MD; Heribert Schunkert, MD; Adnan Kastrati, MD; Sebastian Kufner, MD; for the ISAR-TEST 4 (Intracoronary Stenting, Angiographic Results: Test Efficacy of 3 Limus-Eluting Stents) Investigators†

2021;10:e020165. DOI: 10.1161/JAHA.120.020165

Đặc điểm tổn thương

Lesion Characteristics	With Diabetes Mellitus	Without Diabetes Mellitus	*P* Value
Lesions	(n=714)	(n=1819)	
Vessel			0.16
LAD	303 (42.4)	822 (45.2)	
LCx	210 (29.4)	467 (25.7)	
RCA	201 (28.2)	530 (29.1)	
Ostial	121 (16.9)	304 (16.7)	0.93
Bifurcational	155 (21.7)	451 (24.8)	0.11
Chronic occlusion	37 (5.2)	88 (4.84)	0.80
Complex (B2/C)	514 (72.0)	1315 (72.3)	0.92
Lesion length, mm,	15.6 (9.1)	14.7 (±8.65)	0.020*

2021;10:e020165. DOI: 10.1161/JAHA.120.020165

Khác biệt trong tổn thương phân nhánh

	Đái tháo đường			Không đái tháo đường		
	Yukon	Xience		Yukon	Xience	
Lesions	(n=473)	(n=241)		(n=1210)	(n=609)	
Vessel			0.29			0.24
LAD	191 (40.4)	112 (46.5		562 (46.4)	260 (42.7)	
LCx	145 (30.7)	65 (27.0)		309 (25.5)	158 (25.9)	
RCA	137 (29.0)	64 (26.6)		339 (28.0)	191 (31.4)	
Ostial	74 (15.6)	47 (19.5)	0.23	193 (16.0)	111 (18.2)	0.25
Bifurcational	102 (21.6)	53 (22.0)	0.97	319 (26.4)	132 (21.7)	**0.03**
Chronic occlusion	25 (5.29)	12 (4.98)	>0.99	64 (5.3)	24 (3.9)	0.25
Complex (B2/C)	343 (72.5)	171 (71.0)	0.73	882 (72.9)	433 (71.1)	0.45
Lesion length, mm,	15.5 (±9.29)	15.7 (±8.82)	0.77	14.5 (±8.52)	15.0 (±8.91)	0.32
Minimal Lumen Diameter, mm						
Before Procedure	0.94 (±0.45)	0.99 (±0.46)	0.11	1.00 (±0.52)	0.99 (±0.51)	0.65
After Procedure	2.52 (±0.48)	2.55 (±0.44)	0.42	2.60 (±0.50)	2.61 (±0.43)	0.69

2021;10:e020165. DOI: 10.1161/JAHA.120.020165

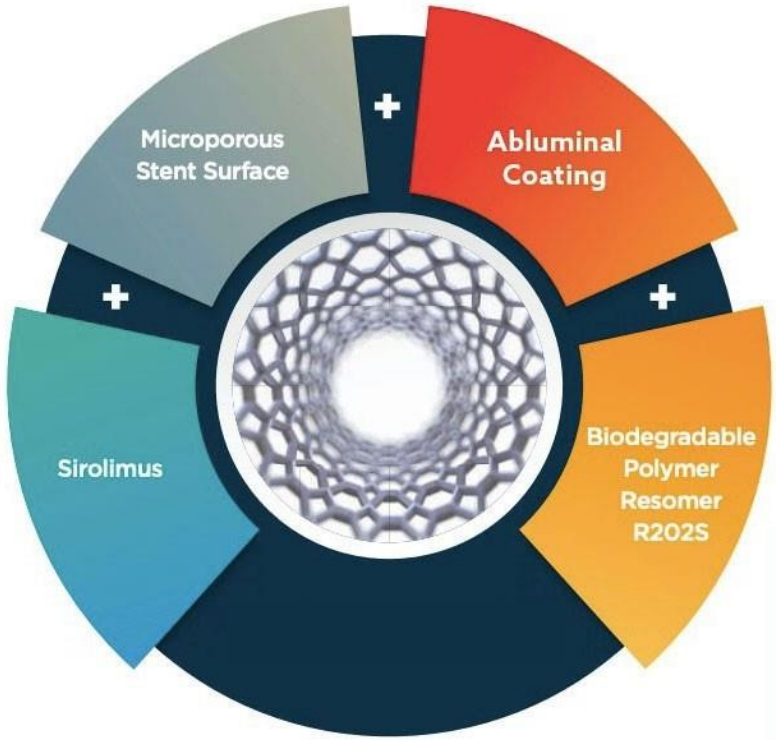
YuChooSeR Device

Yukon® Choice PC

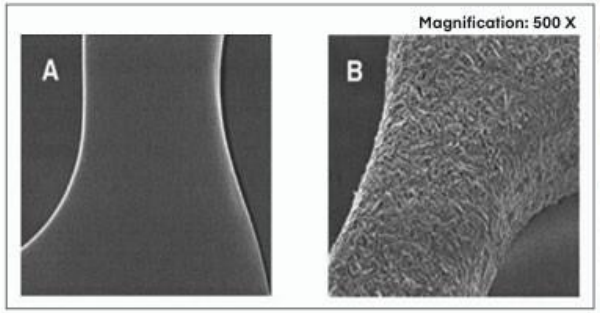
Sirolimus Eluting Coronary Stent System

Yukon® Chrome PC

Sirolimus Eluting Coronary Stent System



Scanning Electron Microscope image of the unique Microporous Surface (PEARL)



A. Smooth (Electropolished) Stent Surface

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10 YEARS CLINICAL DATA OF SAFETY & EFFICACY

The first 2nd gen. DES with 10 years of clinical data worldwide

Circulation

ORIGINAL RESEARCH ARTICLE

Ten-Year Clinical Outcomes From a Trial of Three Limus-Eluting Stents With Different Polymer Coatings in Patients With Coronary Artery Disease

Results From the ISAR-TEST 4 Randomized Trial

Editorial, see p 334

Sebastian Kufner, MD

2019;139:325–333. DOI: 10.1161/CIRCULATIONAHA.118.038065

YuChooSeR Observatory: Objective

- Multicenter post-marketing observatory designed to evaluate the safety and effectiveness of the Yukon Choice PC & Yukon Chrome PC in patients with symptomatic ischemic heart disease requiring stenting, used in routine clinical practice.

Prospective
Multicentric
Single Arm
Open Label

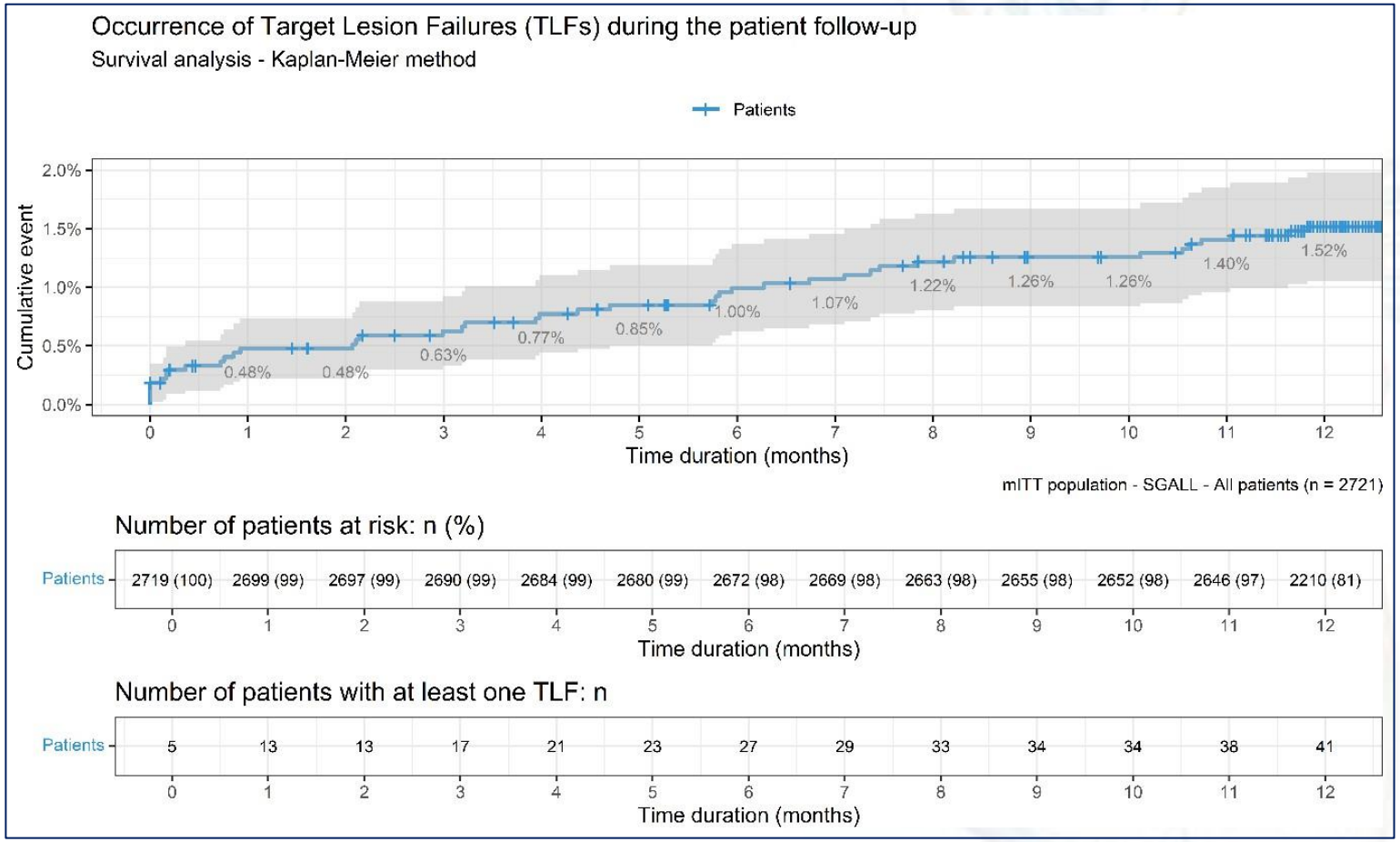
Enrolment Period
4 Years (from Q1 2019)
Total Study Duration
5 Years

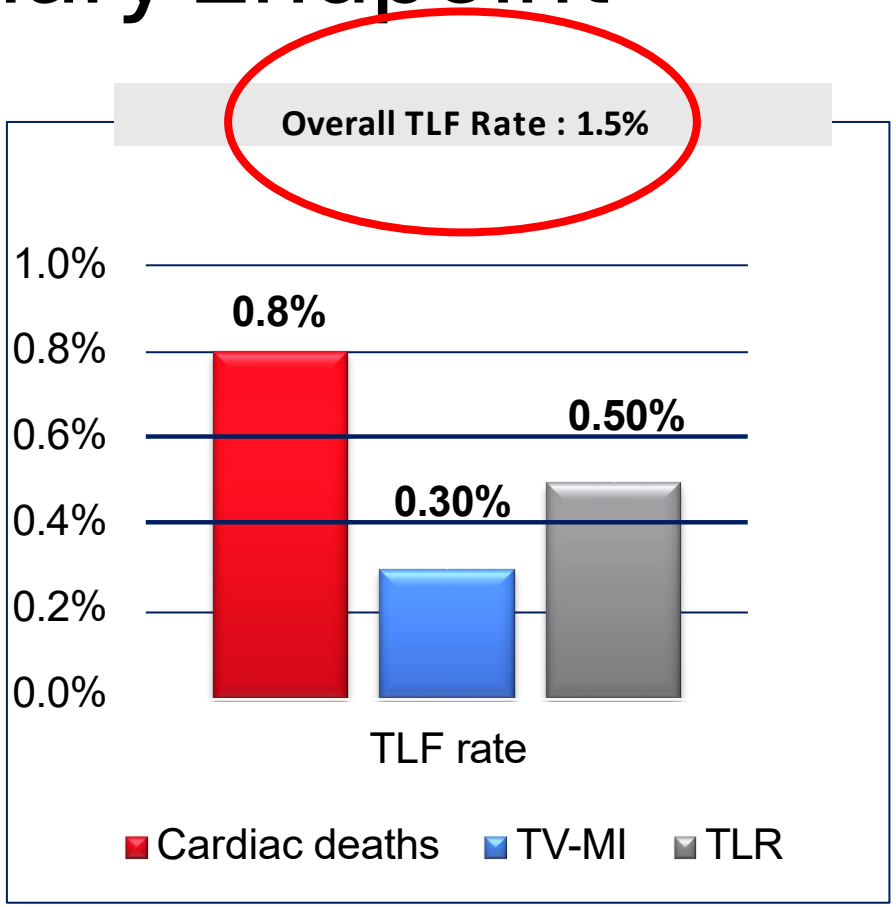
Follow-up at
12 months

Total Study Population
2721 enrolled from 28 sites

2019;139:325–333. DOI: 10.1161/CIRCULATIONAHA.118.038065

YuChooSeR Observatory: Primary Endpoint





2019;139:325–333. DOI: 10.1161/CIRCULATIONAHA.118.038065

Kết luận nghiên cứu

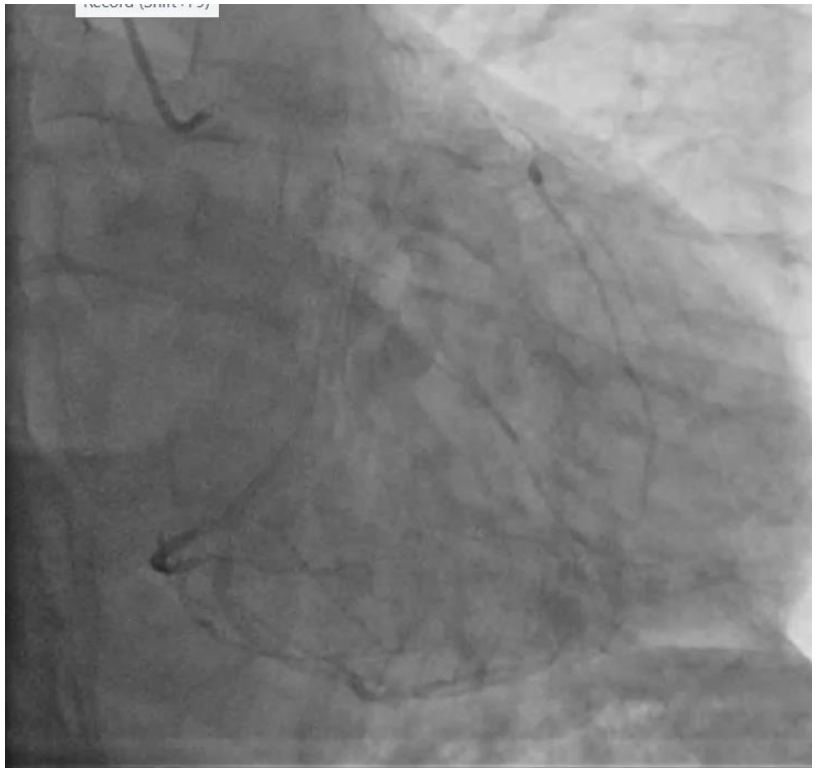
- Quan sát YuChooSeR là nghiên cứu sổ bộ quy mô lớn đầu tiên ở Châu Âu về Yukon Chrome PC trong thực tế lâm sàng.

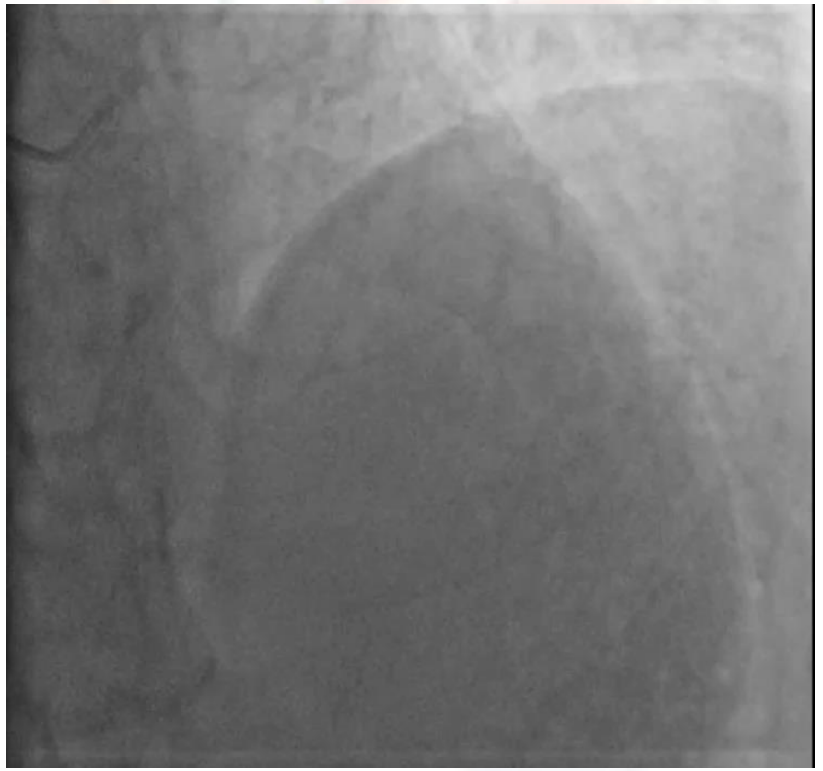
- Với tỷ lệ thất bại của tổn thương đích chỉ 1,5% sau một năm, Yukon Chrome PC cho thấy một trong những tỷ lệ biến cố bất lợi thấp nhất từng được ghi nhận ở loại stent DES thế hệ mới trong PCI thường quy.

Ca lâm sàng 1

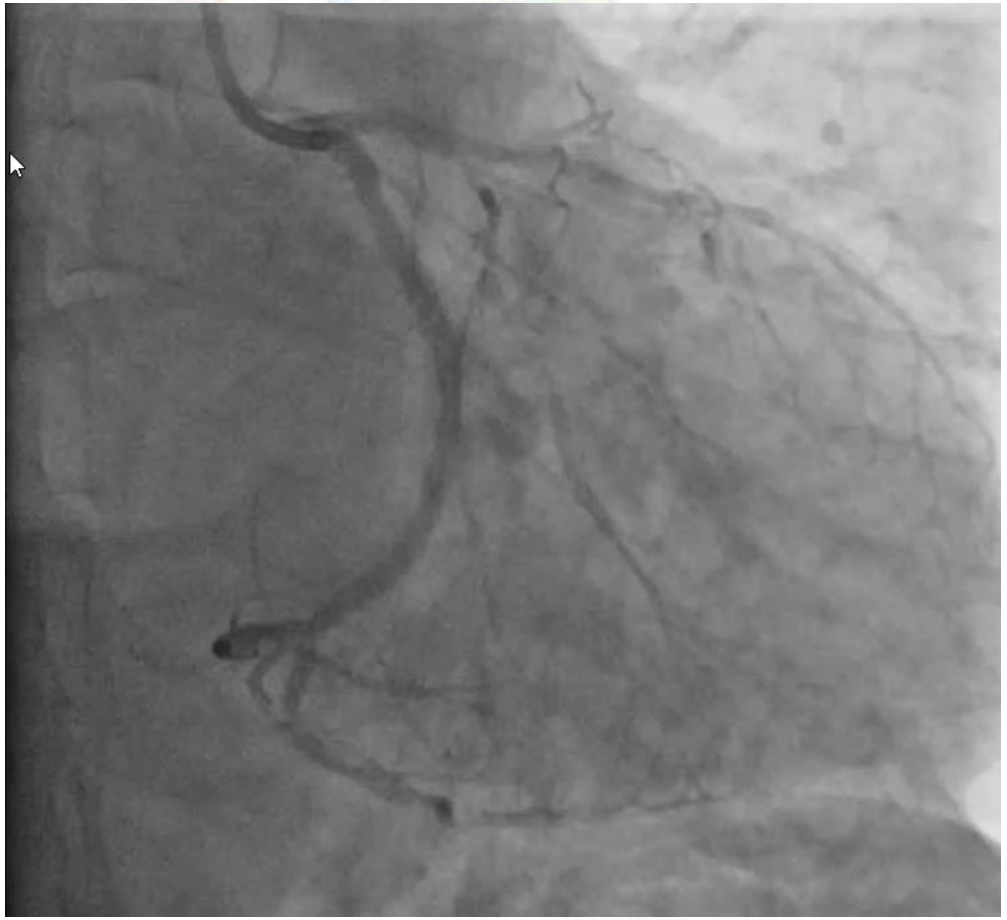
- Bệnh nhân nam D.R, 79 tuổi
- Nhập viện vì khó thở, đau thắt ngực
- Chẩn đoán: **NSTEMI; Suy tim giai đoạn III-IV**
- Tiền sử: Hút thuốc lá

Angiogram





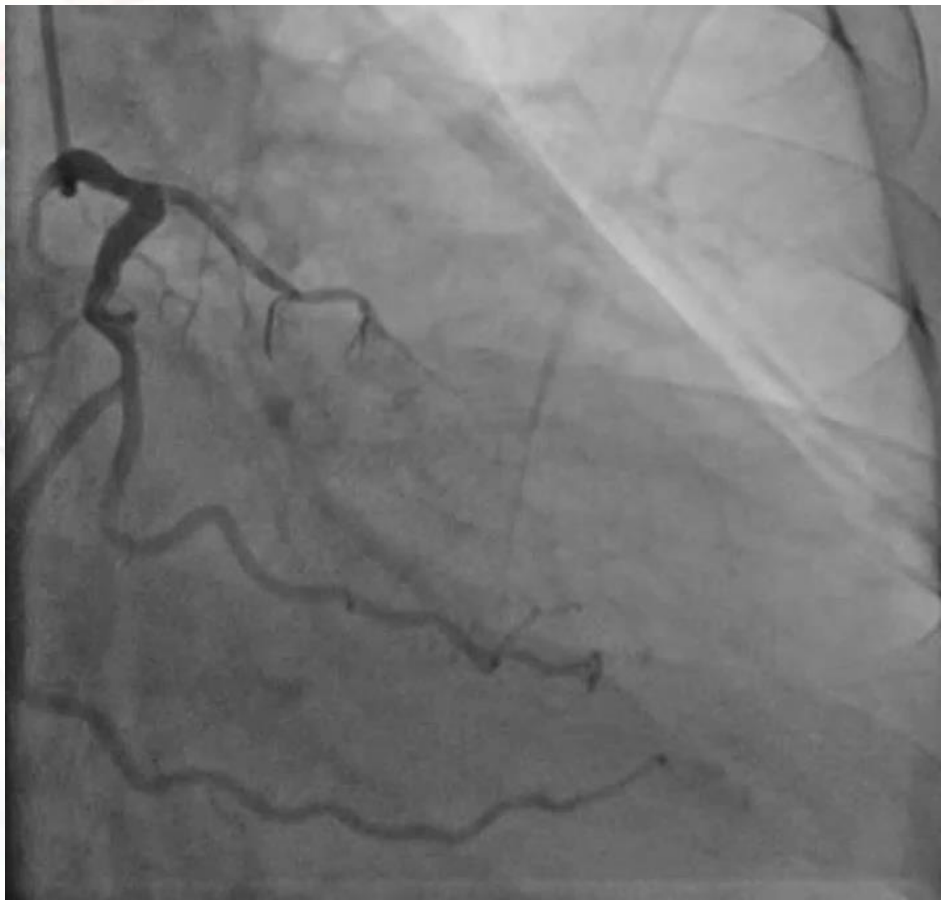
Stent Yukon Chrome 3.0x28mm 16atm

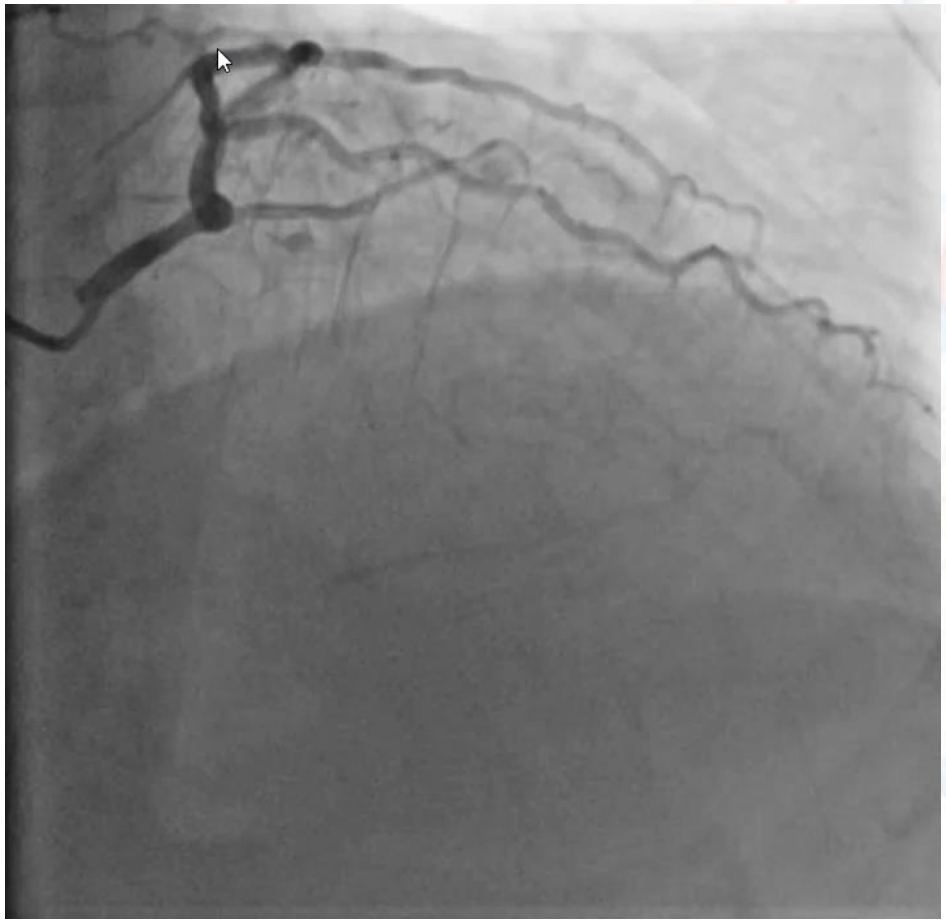


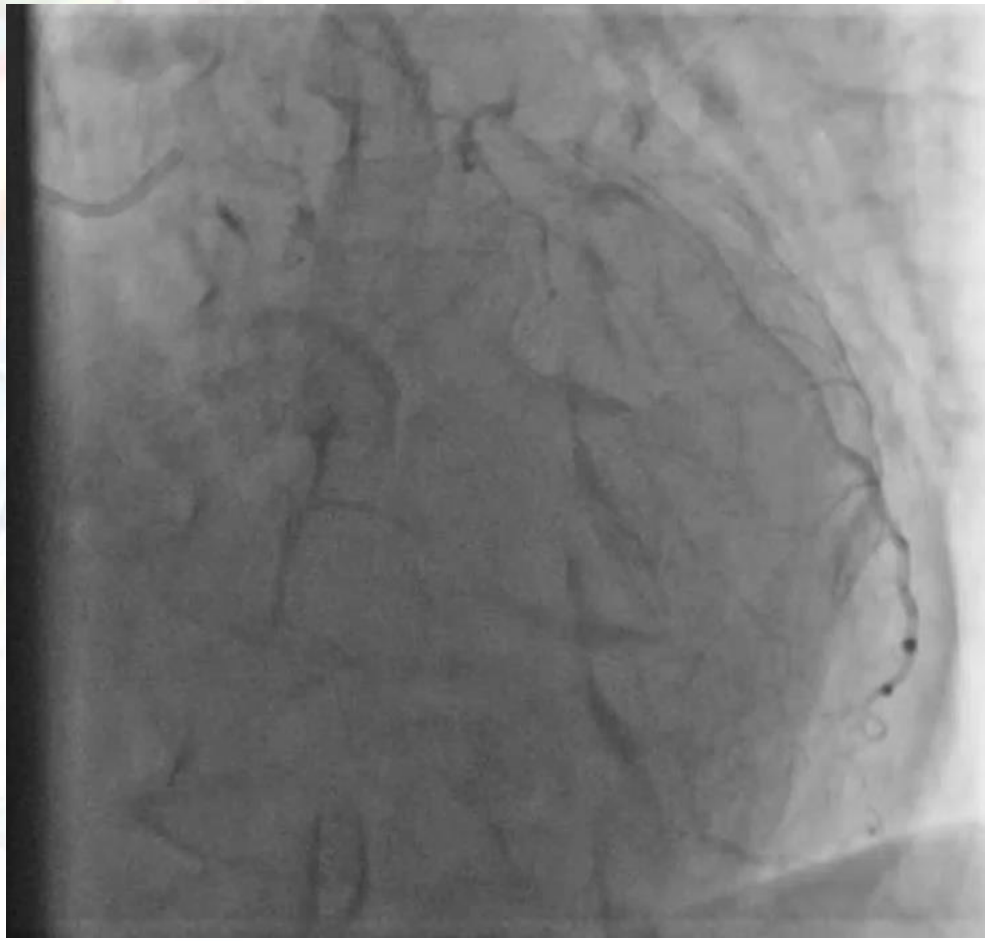
After 4 months follow up

Case 2

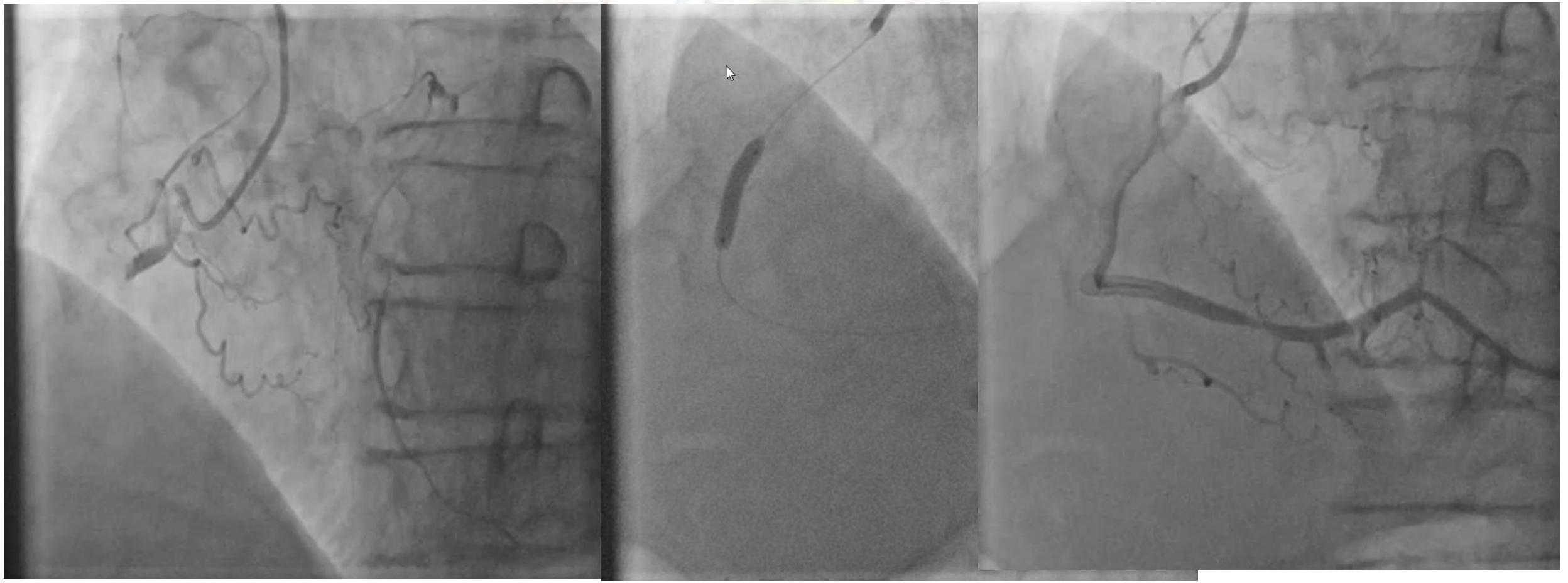
- Bệnh nhân nam N.H.H, 87 tuổi
- Vào viện vì ngất và đau thắt ngực
- Chẩn đoán: **STEMI, ĐTĐ type 2**
- Tiền sử: Hút thuốc lá, BMV đặt stent 10 năm







Yukon Chrome 3.5x21mm, 16atm



Kết luận

- Yukon là thế hệ stent được thiết kế độc đáo, kết quả theo dõi lâu dài trên 10 năm
- Stent Yukon phù hợp cả trên bệnh nhân đái tháo đường hoặc không đái tháo đường
- Yukon Chrome PC cho thấy một trong những tỷ lệ biến cố bất lợi thấp nhất từng được ghi nhận ở loại stent DES thế hệ mới trong PCI thường quy.

Thank you for your attention !