



# COMPLEX PCI 2018

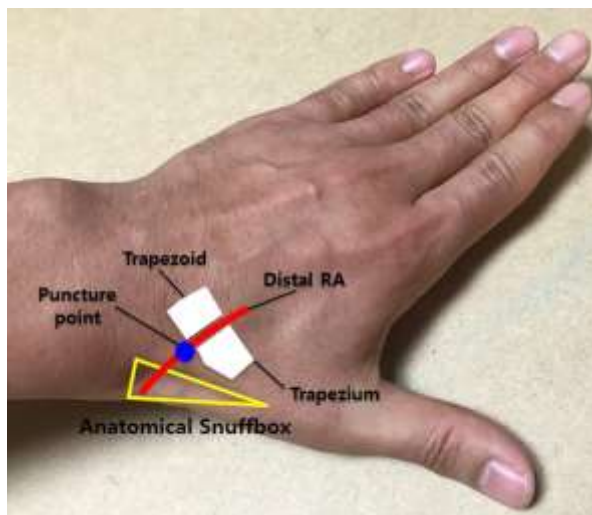
Technical Forum II

Session VI: Transradial PCI

Seoul, Korea, 29 Nov 2018



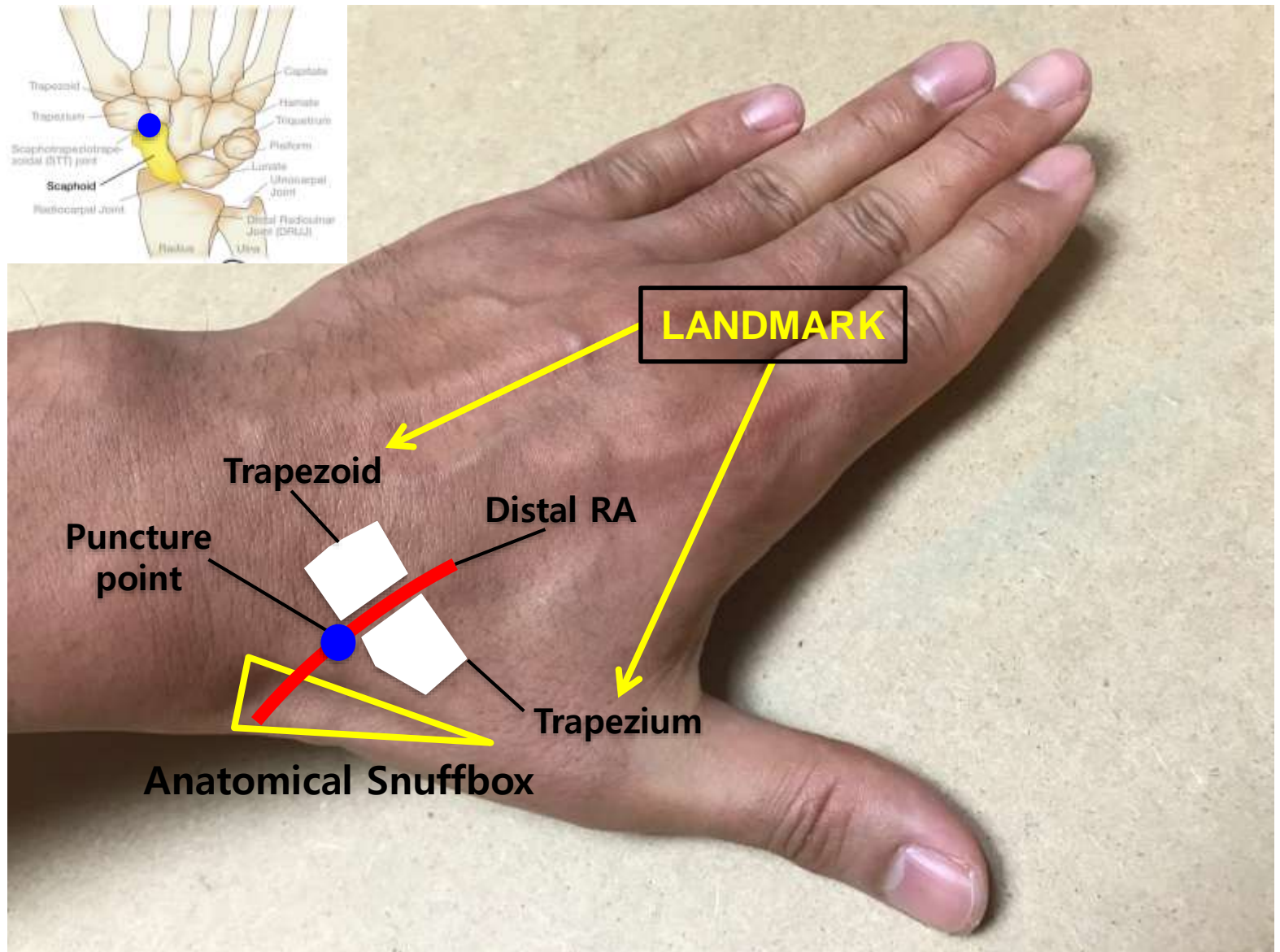
## Feasibility of PCI via left snuffbox approach



**Yongcheol Kim**

Chonnam National University Hospital, Gwangju, Korea

# Where is the anatomical snuffbox?





# Positioning for left snuffbox approach



Foot

Head



Lt. hand placing on Rt.femoral area (not neutral position)



Lt. hand placing on Lt. femoral area (Neutral position)



Foot

Head

Operator standing on the left side of the patient





# How to do snuffbox puncture



20 G needle-cannula assembly with 0.025-inch wire

Through-and-through technique  
for posterior wall puncture

→ more painful due to the touch of periostium



21 G open needle with 0.018-inch hair wire

Seldinger technique  
for anterior wall puncture

→ less painful due to no touch of periostium



Puncture with a 21-gauge open needle  
(Seldinger technique)



# Concern regarding snuffbox approach (#1 success rate of snuffbox puncture)



Study	Location	Patients	Success rate (puncture)	Success rate (cannulation)
Kiemeneij (Eurointervention 2018)	Netherlands	70	94%	89%
Soydan et al. (Anatol J Cardiol 2018)	Turkey	54	100%	100%
Valsecchi et al. (J Invasive Cardiol 2018)	Italy	52	94%	90%
WSCH (Eurointervention 2018)	Korea	200	95%	95%
CNUH (Korean Circ J 2018)	Korea	150	93%	88%
<b>Overall</b>		<b>526</b>	<b>95.1% (n=500)</b>	<b>92.3% (n=486)</b>












## Concern regarding snuffbox approach (#1 success rate of snuffbox puncture)

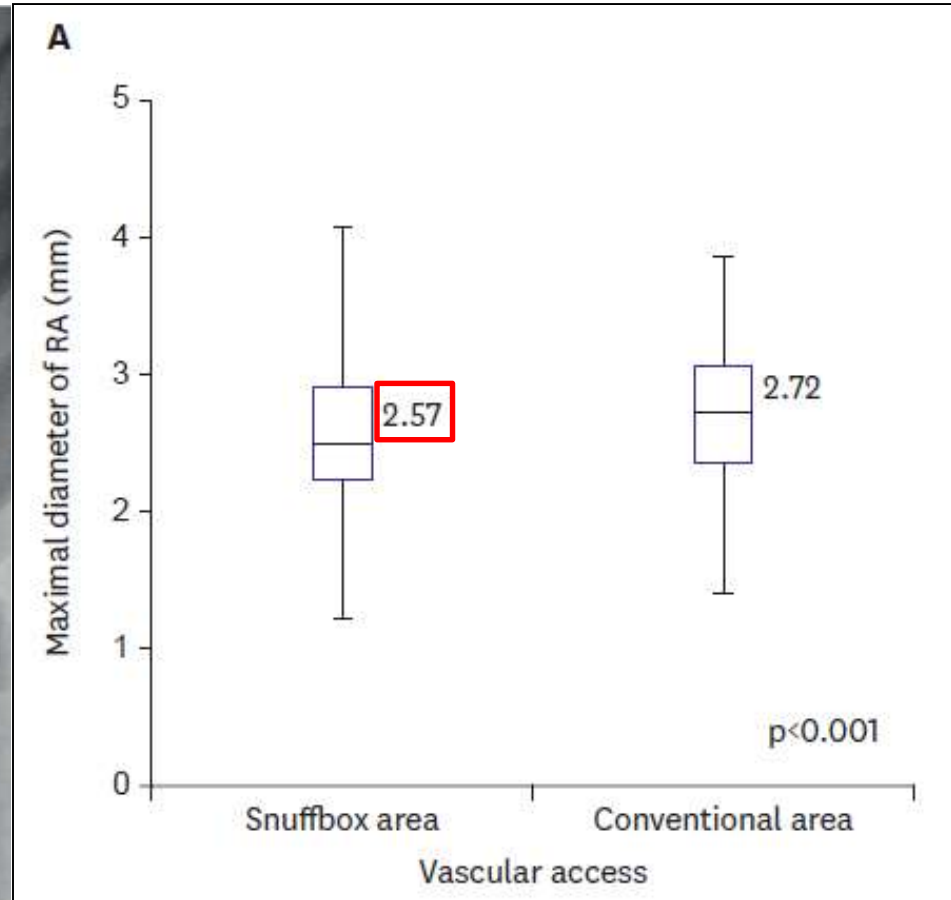
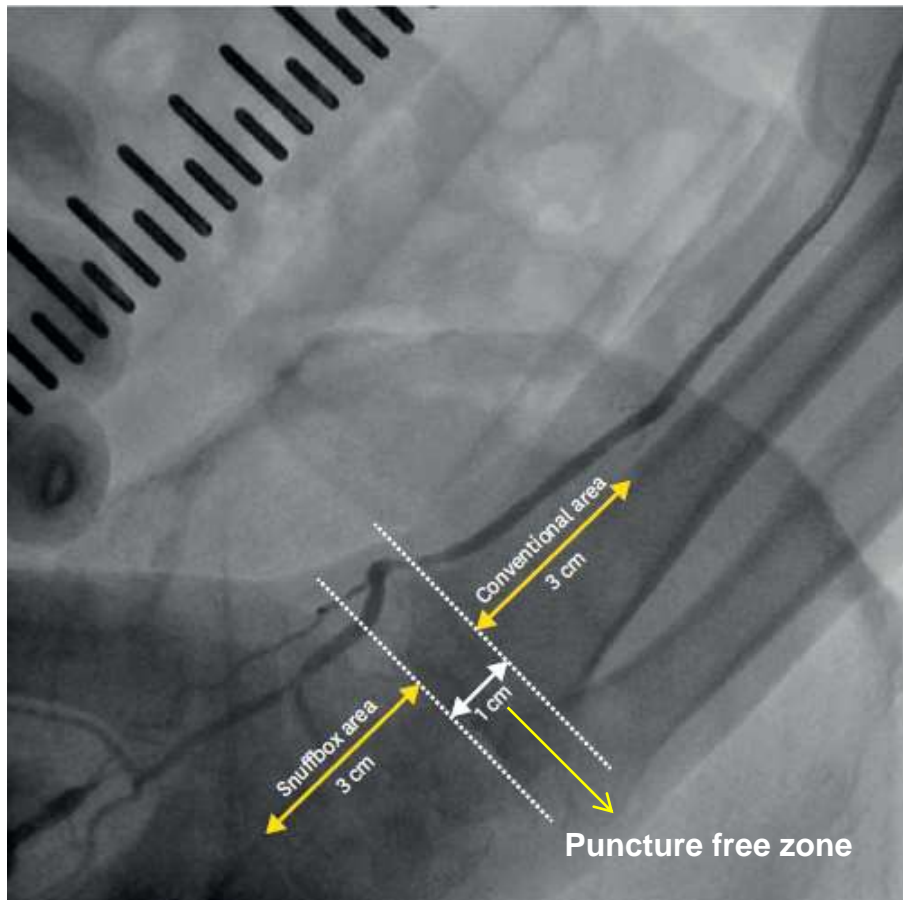


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WSCH (Eurointervention 2018)	Korea	200	95%	95%
CNUH (~ 31 Oct 2018)	Korea	385	96%	92%
<b>Overall</b>		<b>761</b>	<b>95.8% (n=729)</b>	<b>93.2% (n=709)</b>

**Snuffbox approach is a feasible option than you thought!!!**










# Feasibility of Coronary Angiography and Percutaneous Coronary Intervention via Left Snuffbox Approach

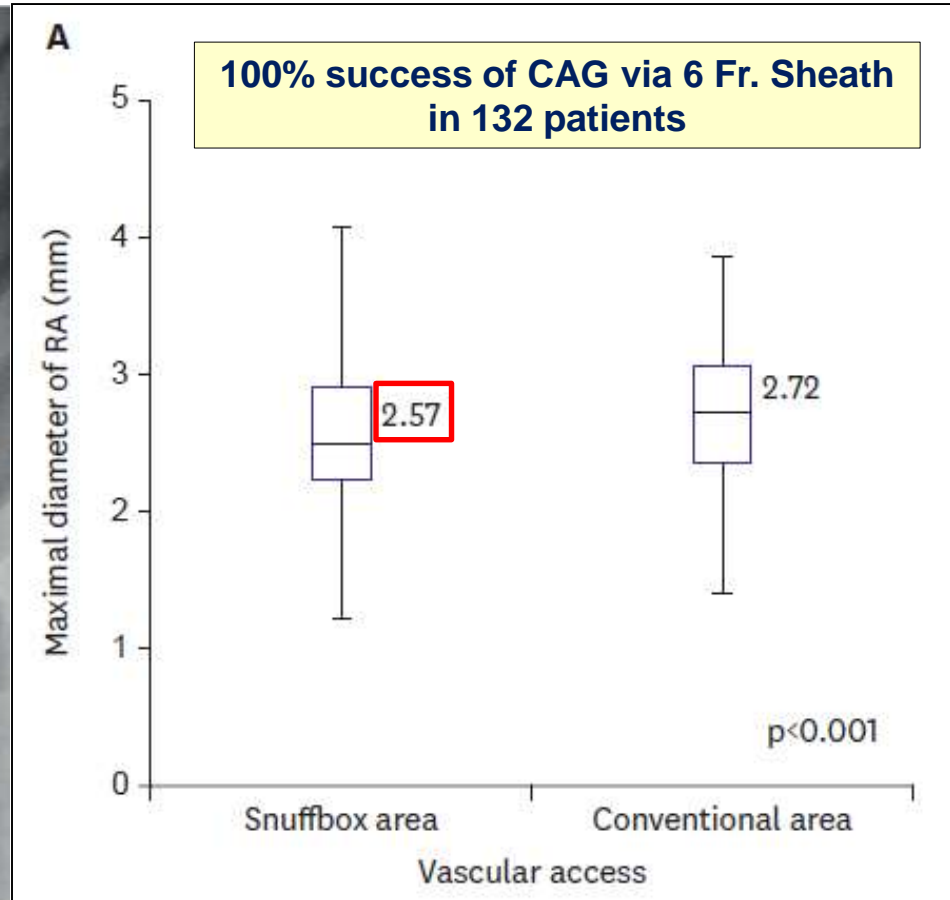
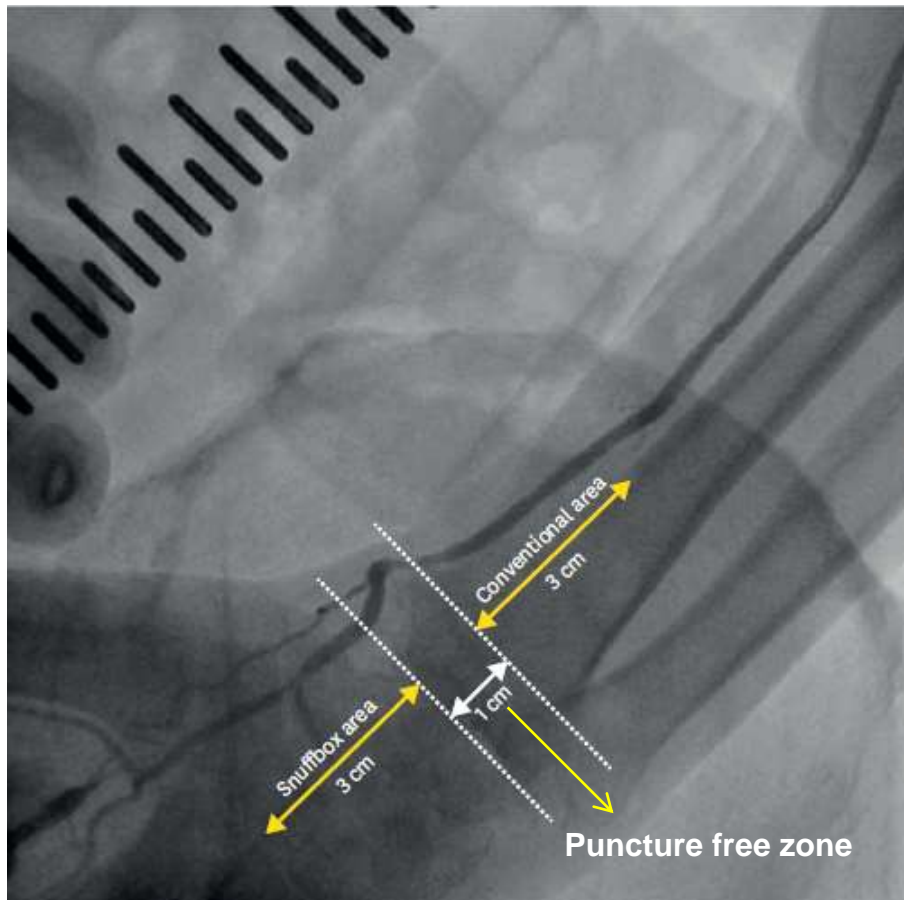
Yongcheol Kim , MD, Youngkeun Ahn , MD, PhD, Inna Kim , MD, PhD, Doo Hwan Lee , RT, Min Chul Kim , MD, PhD, Doo Sun Sim , MD, PhD, Young Joon Hong , MD, PhD, Ju Han Kim , MD, PhD, and Myung Ho Jeong , MD, PhD





# Feasibility of Coronary Angiography and Percutaneous Coronary Intervention via Left Snuffbox Approach

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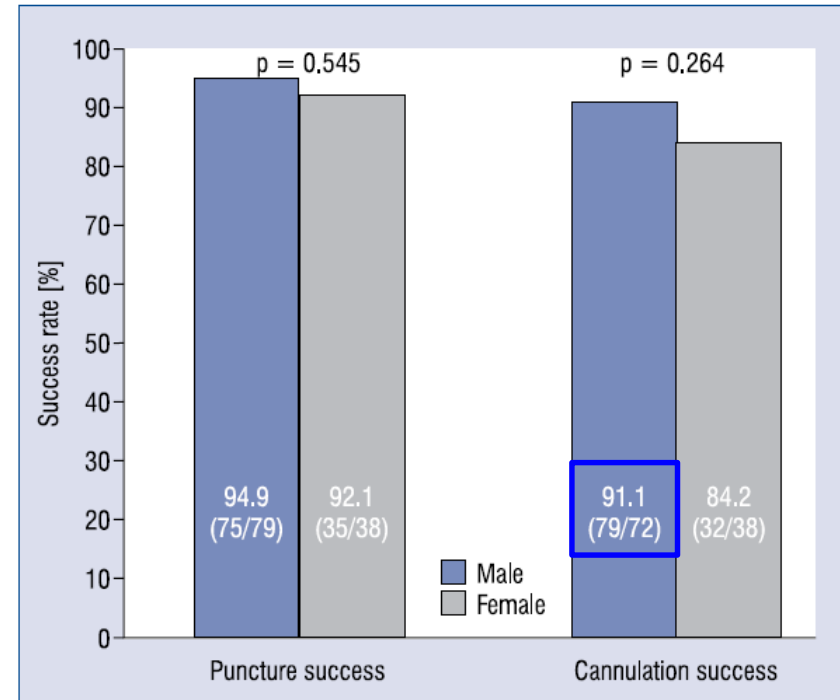
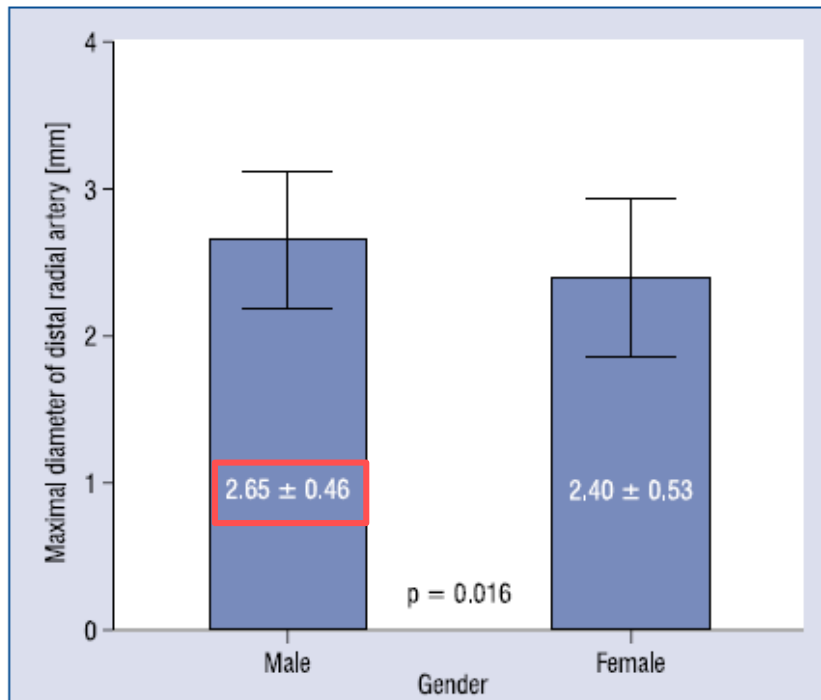




## Gender differences in the distal radial artery diameter for the snuffbox approach

Yongcheol Kim, Youngkeun Ahn, Min Chul Kim, Doo Sun Sim,  
 Young Joon Hong, Ju Han Kim, Myung Ho Jeong

Department of Cardiology, Chonnam National University Hospital, Gwangju, Republic of Korea



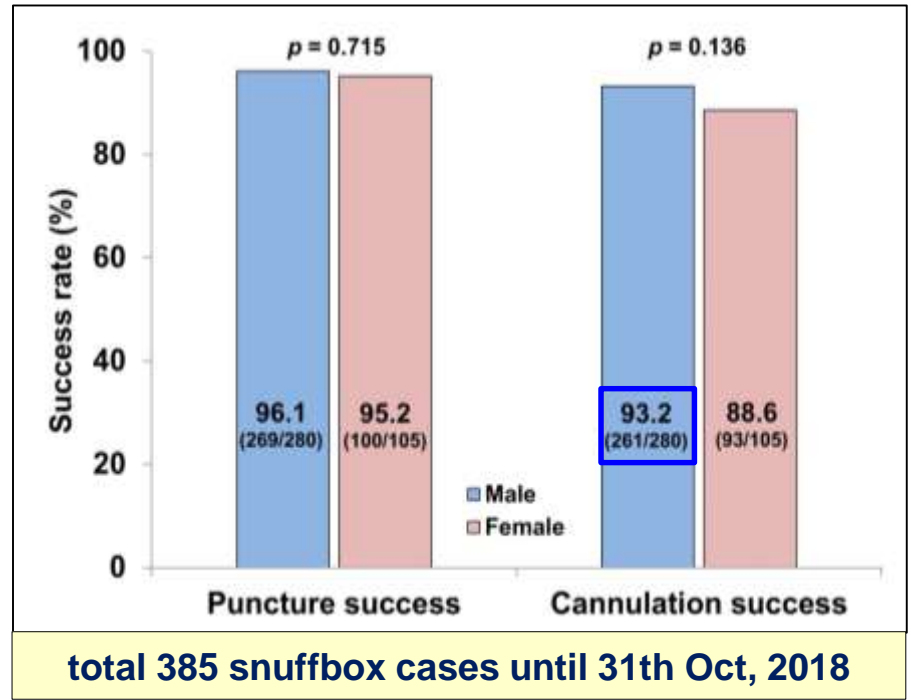
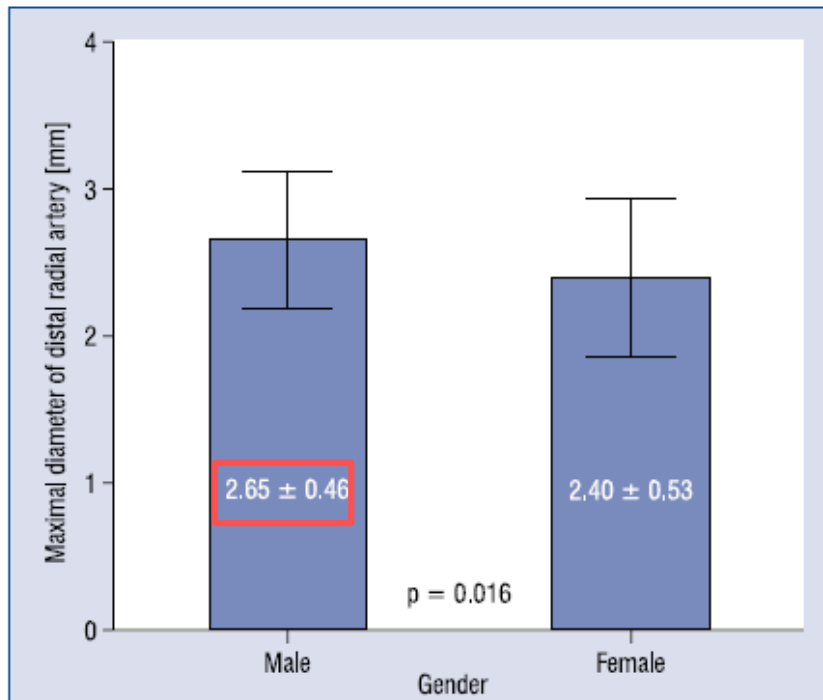


TECHNOLOGY NOTE

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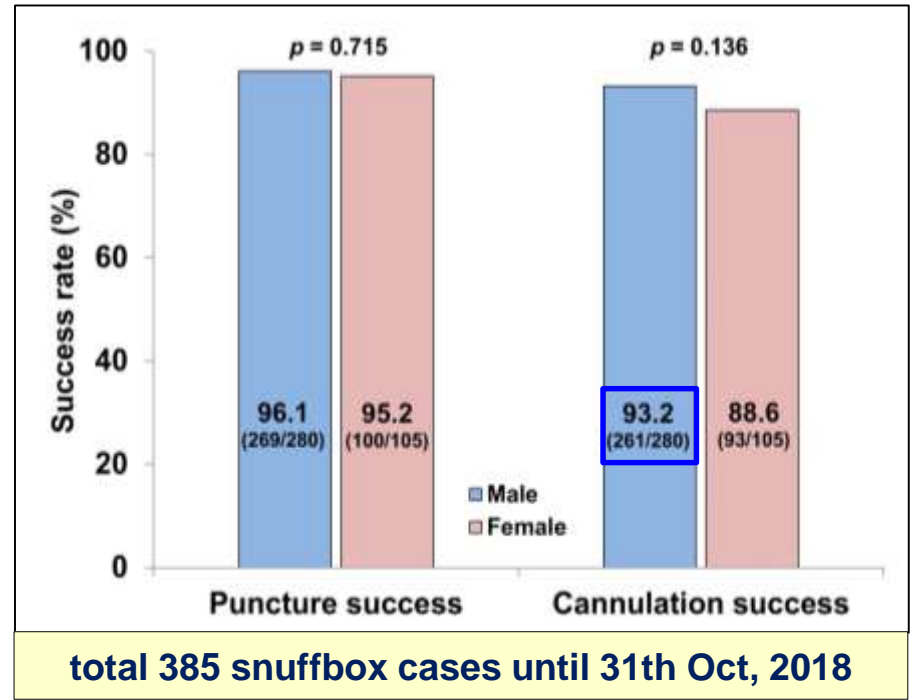
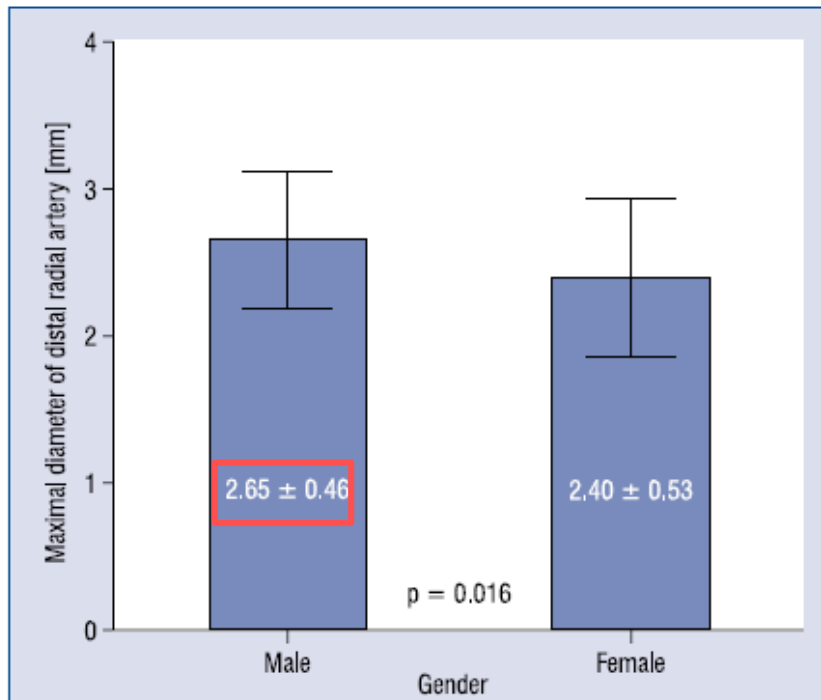
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**Male patients would be more suited to an inexperienced “snuffboxer” when the left snuffbox approach is planned.**





# Don't have to bend your body (Position as same as Rt.radial approach)





# Concern regarding snuffbox approach (#3 Performance of snuffbox PCI)

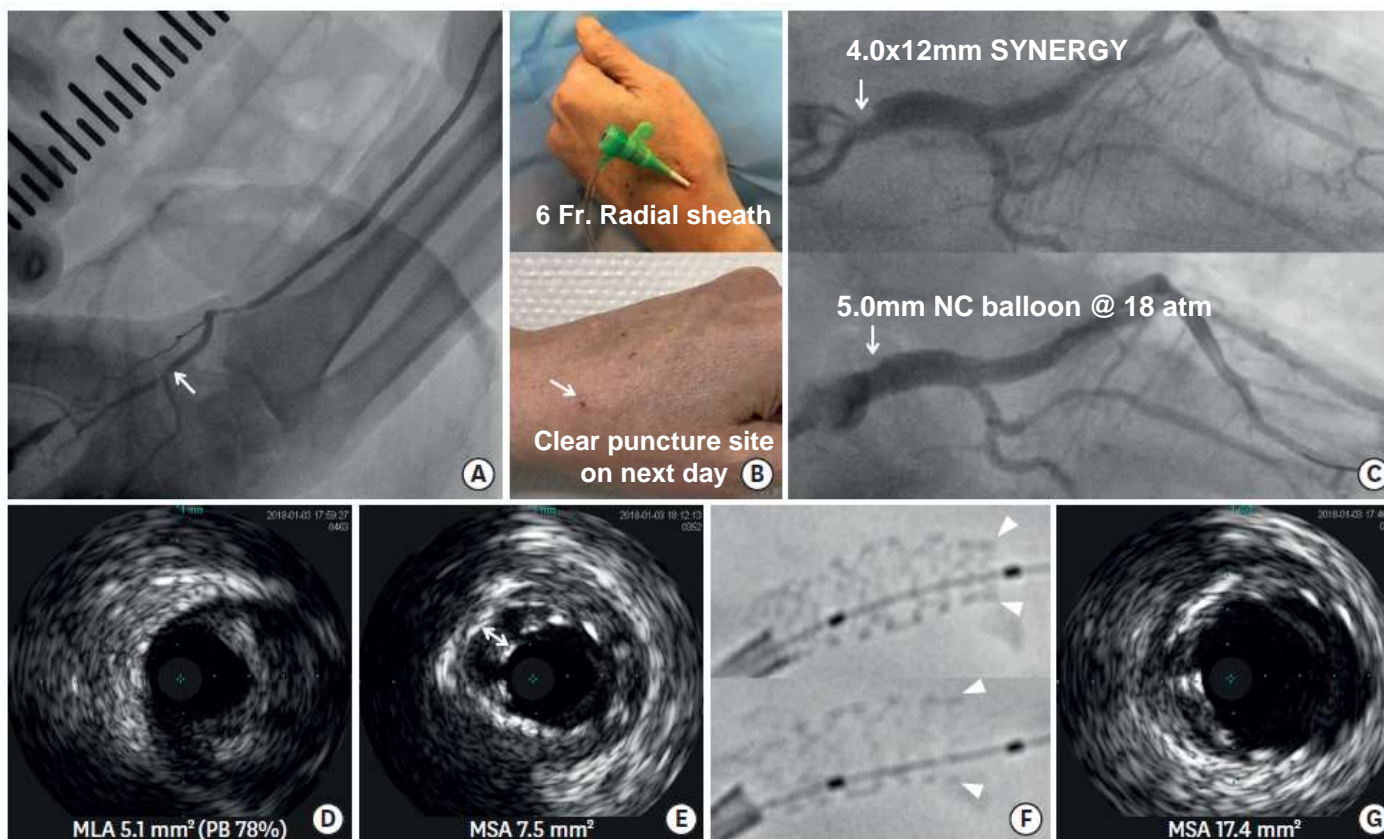


Success rate of PCI via left snuffbox approach: **99.2%** (119/120)

Reason for PCI	n = 119	imaging-guided PCI	<b>17 (14.3%)</b>
- NSTEMI	41 (34.5%)	OCT-guided PCI	11 (9.3%)
- STEMI	<b>13 (10.9%)</b>	IVUS-guided PCI	6 (5.0%)
6 Fr Sheath	<b>115 (96.6%)</b>	Multivessel PCI	<b>15 (12.6%)</b>
Treated vessel	n = 129	Thrombus aspiration	9 (7.6%)
- LM	<b>5 (3.9%)</b>	Left guiding catheter	n = 95
- LAD	53 (41.1%)	- EBU type	68 (71.6%)
- LCx	34 (26.4%)	- Judkins	22 (23.2%)
- RCA	37 (28.7%)	- Amplatz	5 (5.3%)
Stent implantation	110 (92.4%)	Right guiding catheter	n = 31
Case ≥ two stents implantation	<b>29 (24.4%)</b>	- Amplatz	22 (71.0%)
FFR-guidance	7 (17.1%)	- Judkins	9 (29.0%)

## Intravascular Ultrasound-Guided Percutaneous Coronary Intervention with Drug-eluting Stent for Unprotected Left Main Disease via Left Snuffbox Approach

Yongcheol Kim , MD, Myung Ho Jeong , MD, Inna Kim , MD,  
Min Chul Kim , MD, Doo Sun Sim , MD, Young Joon Hong , MD,  
Ju Han Kim , MD, and Youngkeun Ahn , MD





**Left snuffbox approach**

Chonnam National University Hospital

TCTAP

**Live Case Session III**

**Live Case Session II**

5:00 PM – 6:00 PM

Master(s) : *Myung-Ho Jeong, Yves*

Operator(s) : *Charles Chan, Zhili-Cheng, Hyeon-Cheol Gwon, Yutaka Ping Tim Tsui, Cheuk-Man*

Chonnam National University Hospital,  
**1st Operator : Youngkeun Ahn**  
**2nd Operator : Min Chul Kim**  
**3rd Operator : Jumin Won**  
**Imaging Interpreter : Young Joon**

Chonnam National University Hospital,  
**1st Operator : Ju Han Kim**  
**2nd Operator : Doo Sun Sim**  
**3rd Operator : Sung Sik Oh**  
**Imaging Interpreter : Yongcheol**

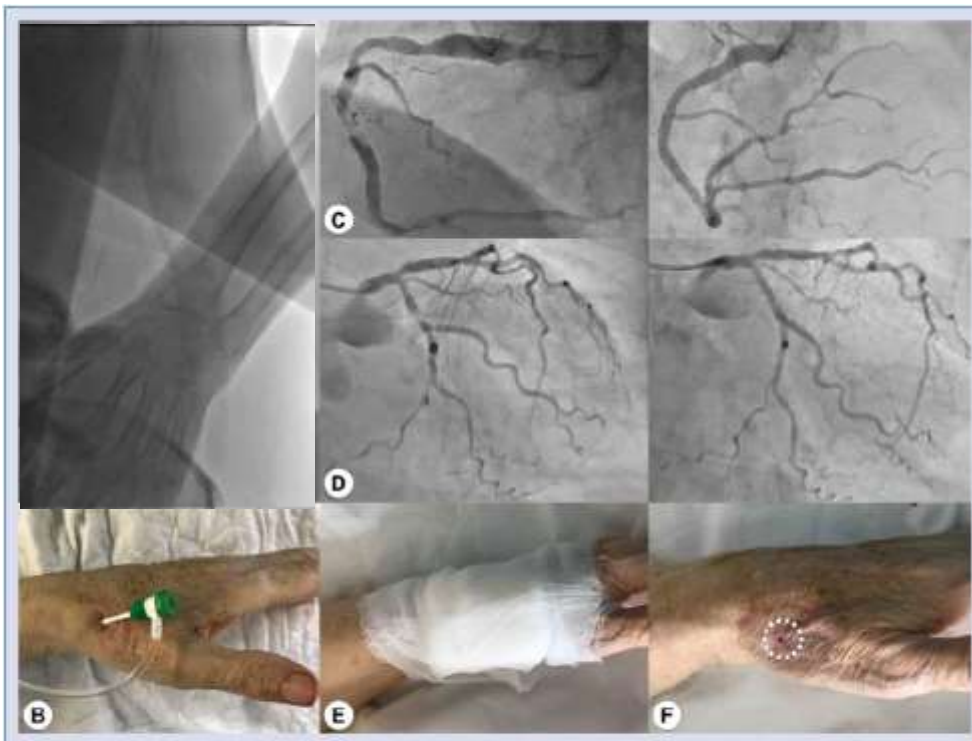
TCTAP

**Chonnam National U  
 Hospital, Gwangju, K**

**OCT-guided PCI for LM bifurcation lesion via left snuffbox approach on live demonstration in TCTAP2018 (2018.04.30)**

# Complete revascularization via left snuffbox approach in a nonagenarian patient with acute myocardial infarction

Kirill Berezhnoi<sup>1,2</sup>, Leonid Kokov<sup>2,3</sup>, Aleksandr Vanyukov<sup>1</sup>, Yongcheol Kim<sup>4</sup>

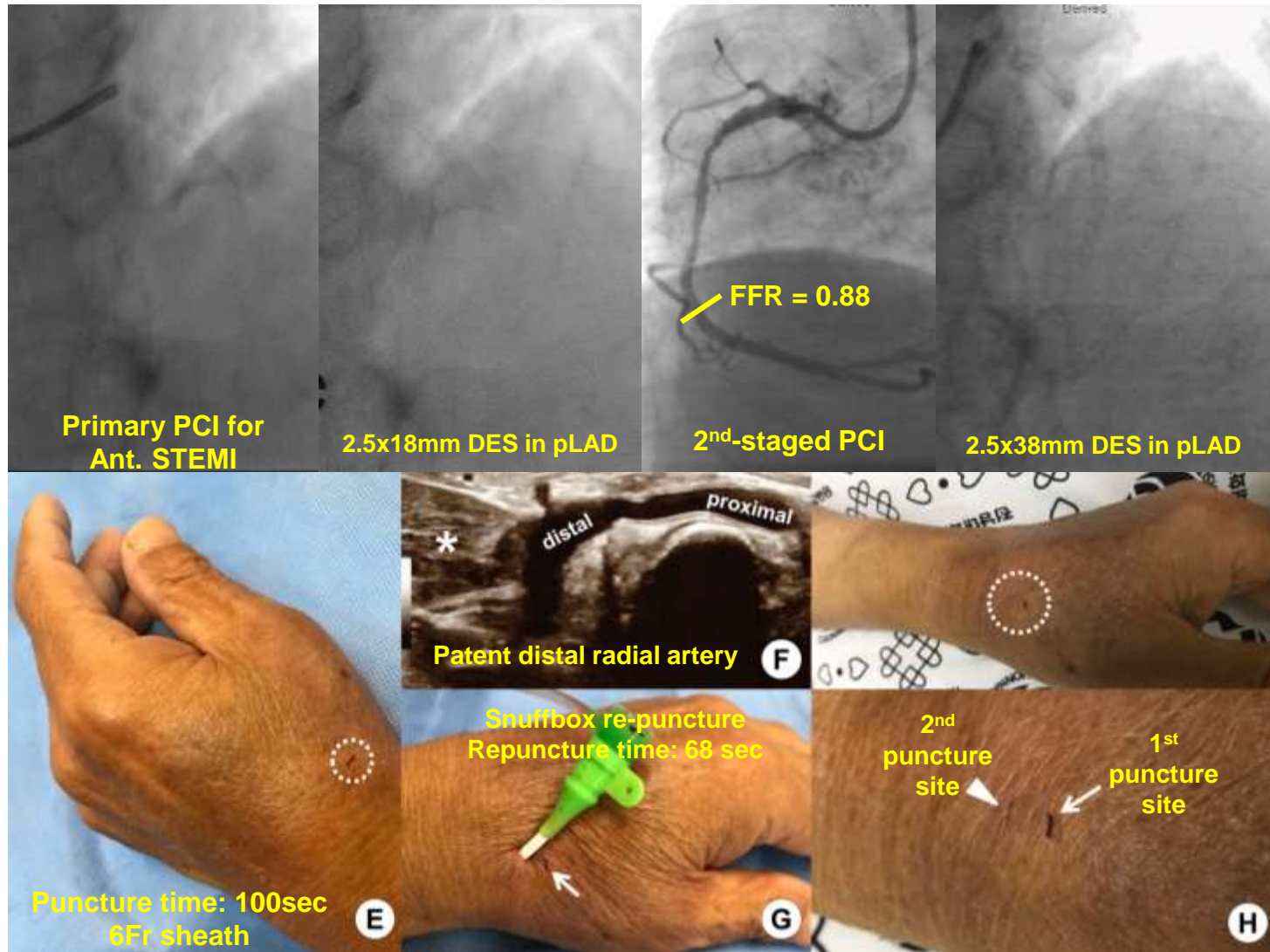


**Figure 1.** A. Peripheral angiography of left hand demonstrating successful puncture of the left distal radial artery (arrow; puncture site of left snuffbox approach); B. Inserted 6 Fr sheath via left snuffbox approach; C. Pre- (left) and post-interventional (right) coronary angiography in the right coronary artery; D. Pre- (left) and post-interventional (right) coronary angiography in the left circumflex artery; E. Hemostasis by manual compressive bandage with gauze; F. No vascular complication of puncture site the following day (white circle).

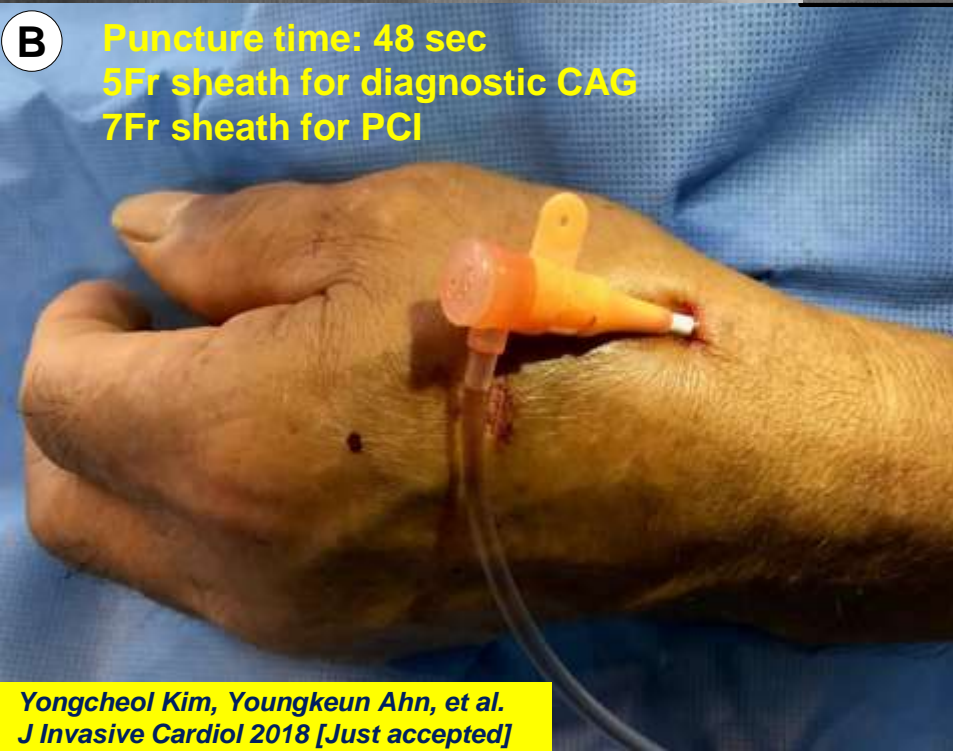
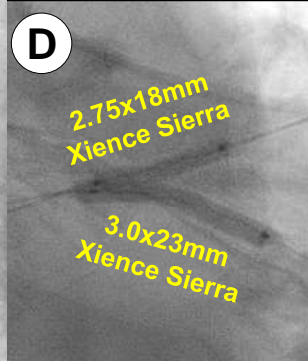
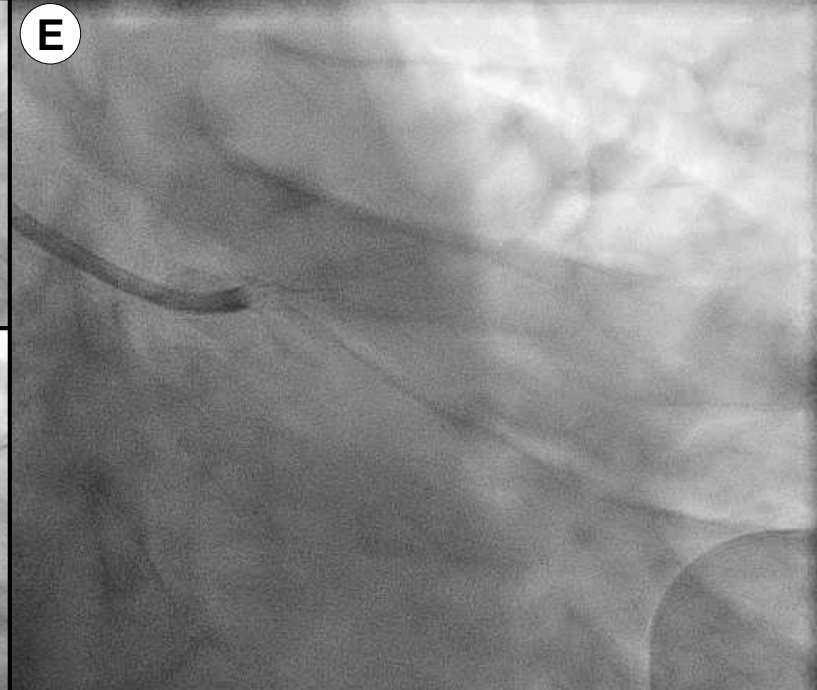
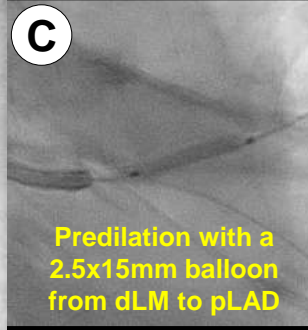
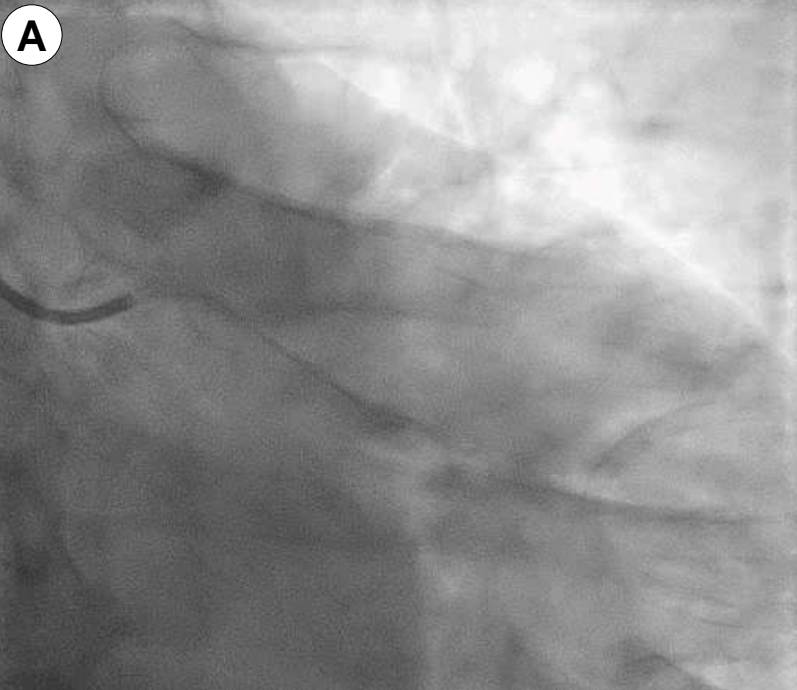
Regarding complete revascularization in patients with acute myocardial infarction, the feasibility of the distal radial artery approach, called snuffbox approach, has not been known well [Kim et al., Korean Circ J. 2018; 48: e118]. Furthermore, percutaneous coronary intervention (PCI) via the right conventional radial approach for very old patients is sometimes challenging due to a difficulty of catheter manipulation by severe subclavian tortuosity leading to crossover to femoral access, even though the transradial approach significantly reduces vascular complication in elderly patients. This case highlights the feasibility of multivessel PCI via the left snuffbox approach in a very old patient with acute myocardial infarction.



# Recannulation of Distal Radial Artery for Staged Procedure After Successful Primary Percutaneous Coronary Intervention









# Snuffbox approach hemostasis



## Compressive bandage method



## Hemostasis by PreludeSYNC™ DISTAL



**Regarding vascular complication, forearm swelling with bruising, not requiring surgery or transfusion, occurred in 2 (1.7%) cases**

# **My personal opinion regarding snuffbox approach**

- **Snuffbox puncture is not difficult than you thought**
- **PCI performance via left snuffbox approach is as same as conventional Rt. radial approach (maybe better)**
- **Left snuffbox approach would be beneficial for the selected patients, such as old age, high bleeding risk, ESRD or CKD, and CABG**
- **Further large, prospective, multicenter, randomized study regarding comparison with the conventional radial approach should be needed**



# Are you ready to become a “Snuffboxer” ??

