

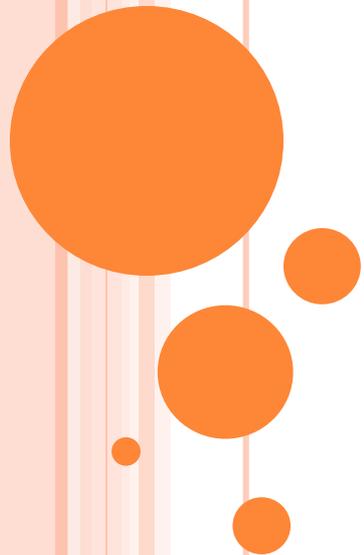
ストラクチャークラブ ジャパン 2017
2017/11/04 @福岡国際会議場 (福岡)

ビデオライブ3: 「TSc-TAVI: Evolut R」

Tips of TA TAVI for beginners

鳥飼 慶

大阪大学大学院医学系研究科 心臓血管外科



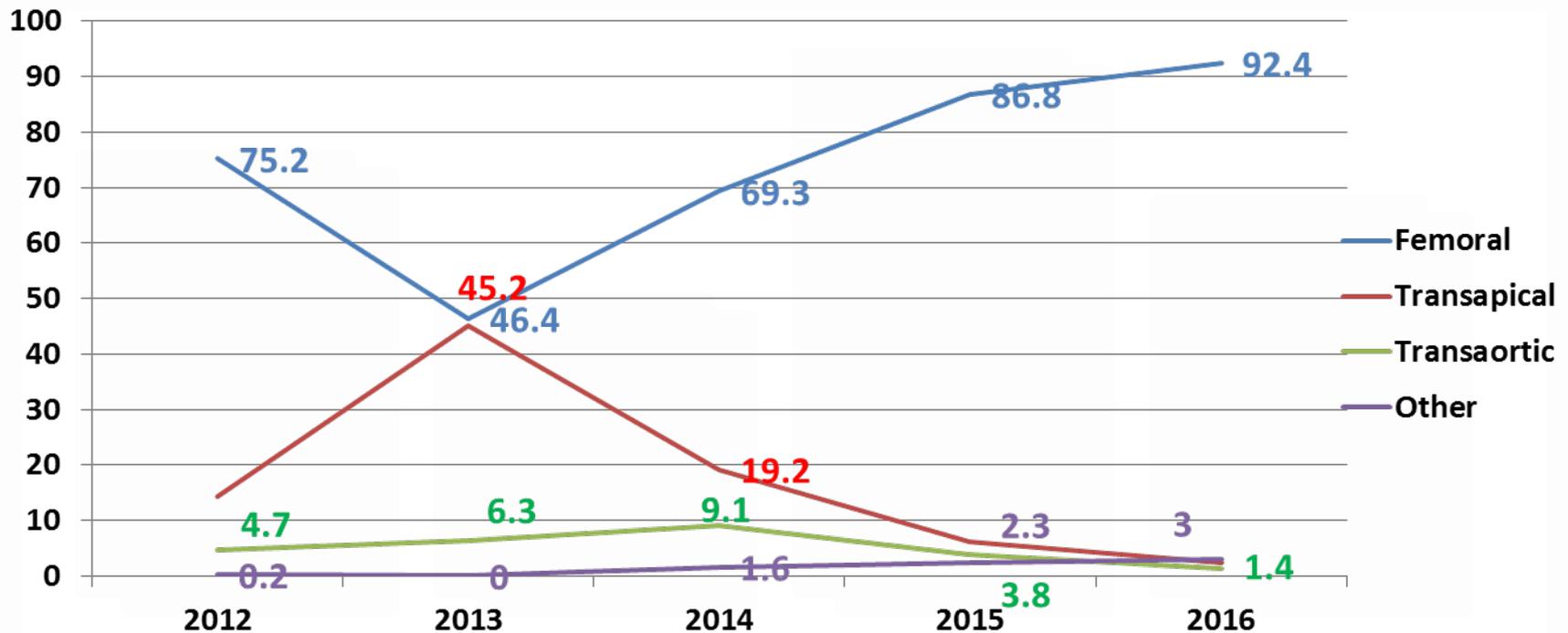
ストラクチャークラブ・ジャパン COI 開示

筆頭発表者名：鳥飼 慶

演題発表に関連し、開示すべきCOI関係にある企業などとして、

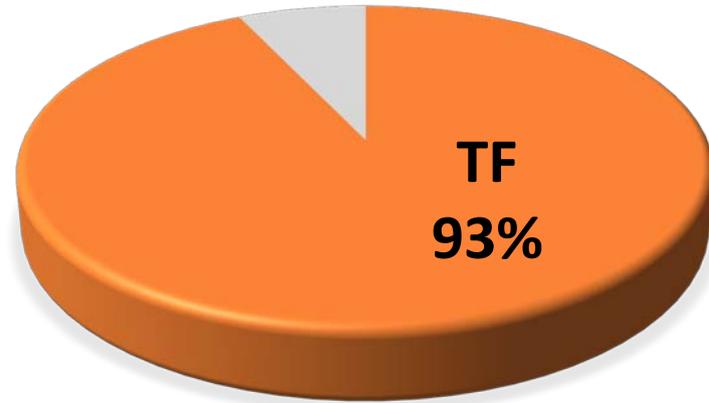
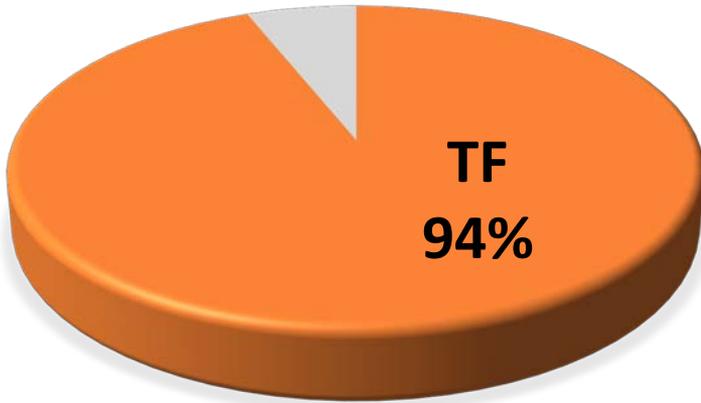
プロクタリング：Edwards Lifesciences

TAVR Access in US



Source: STS/ACC TVT Registry Database.
as of April 10, 2017

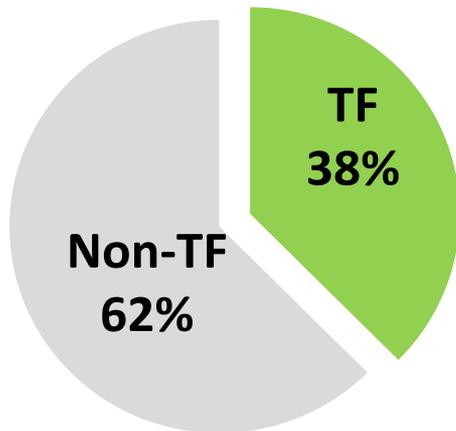
Approach Distribution in Japan



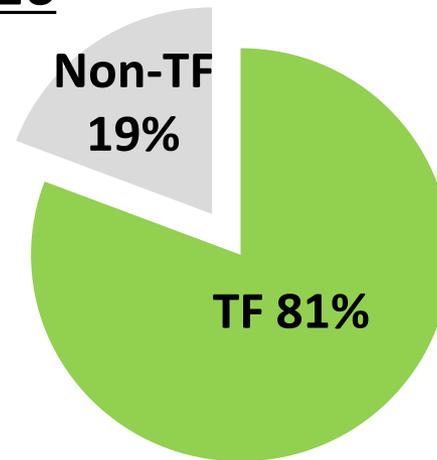
Trend of TAVI Approach

(Osaka Univ.)

2014

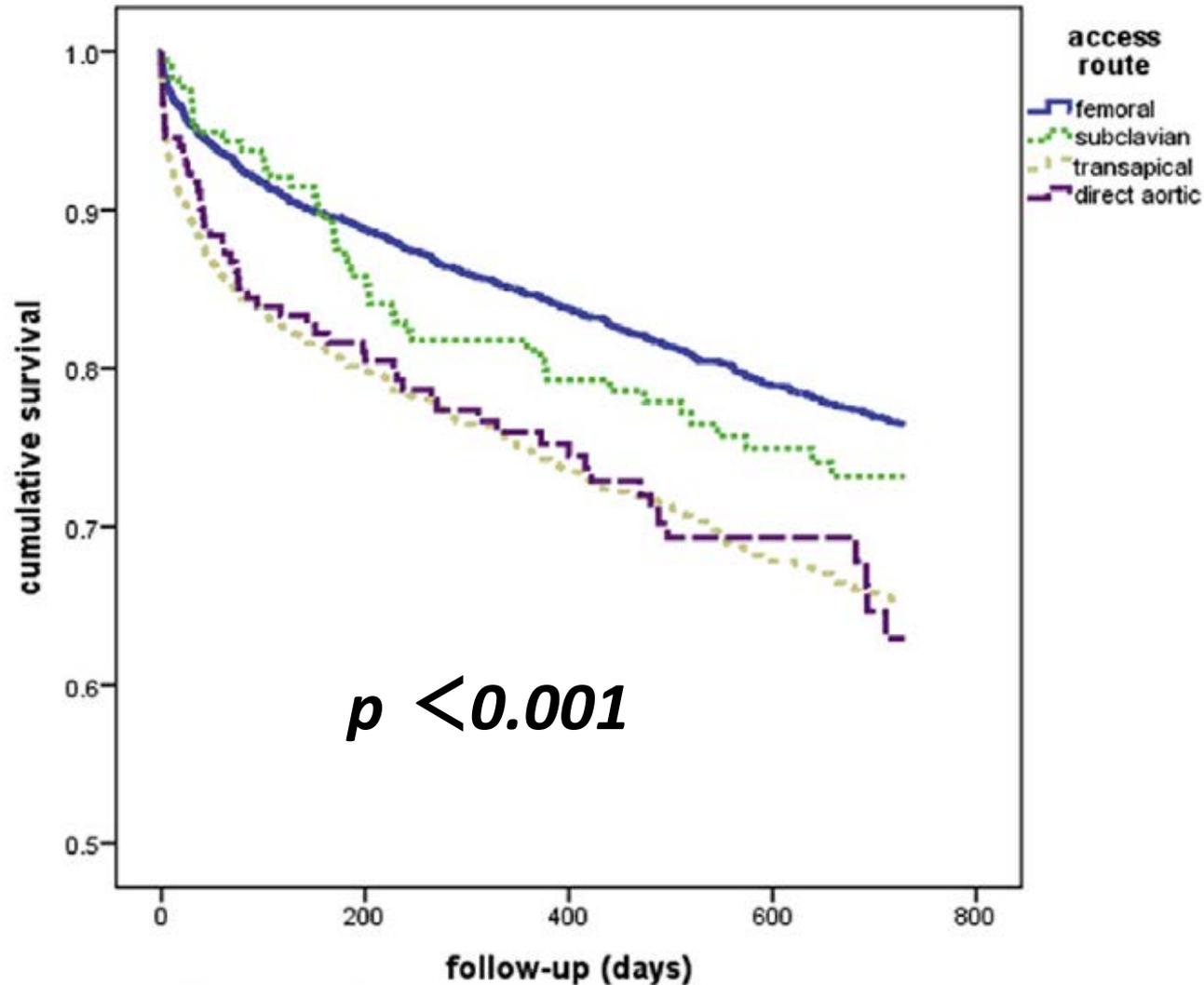


2016



Alternative Approaches is invasive ?

-UK TAVI Registry-



Major Devices and Approach

**SAPIEN
XT/3**



**CoreValve
Evolut R**



Lotus



Portico



Acurate

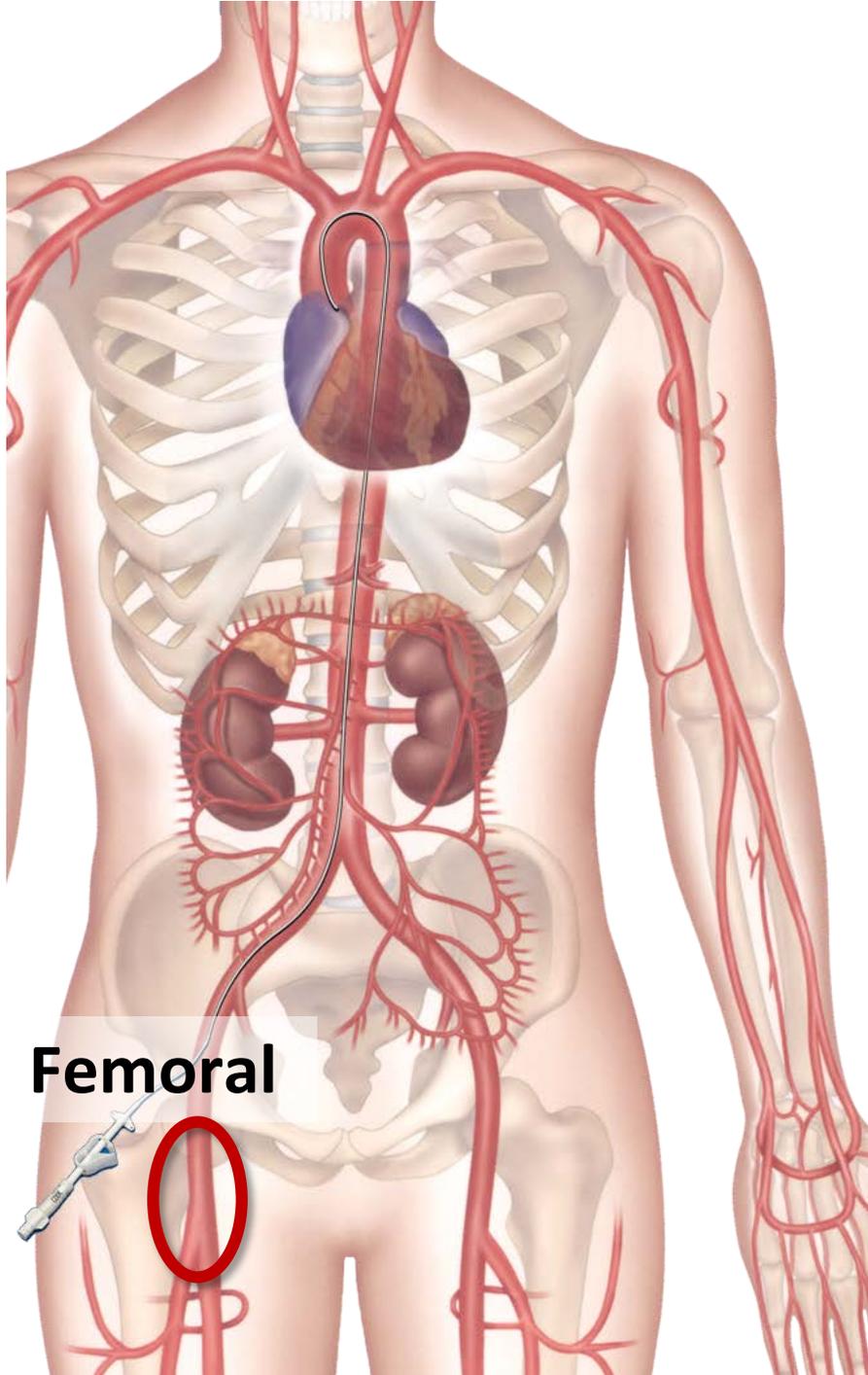


Antegrade



Retrograde



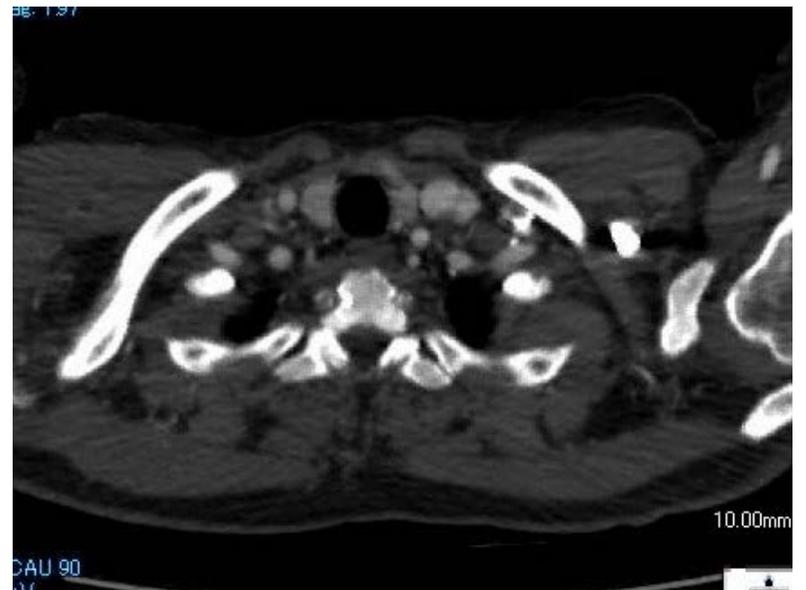
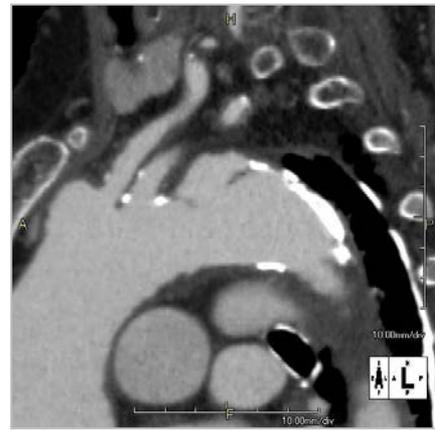


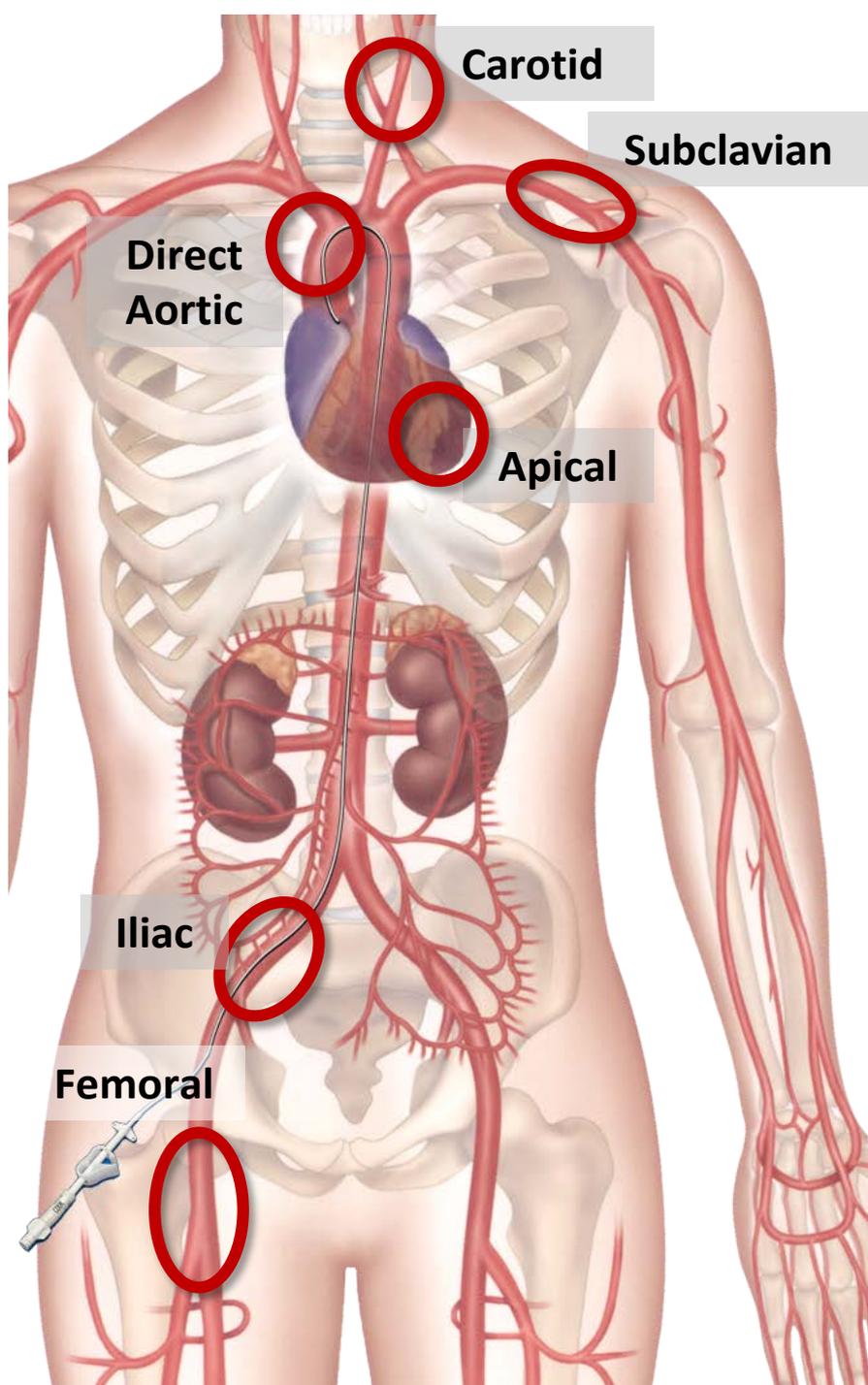
TAVI Approach

TF First !

Femoral







Carotid

Subclavian

Direct
Aortic

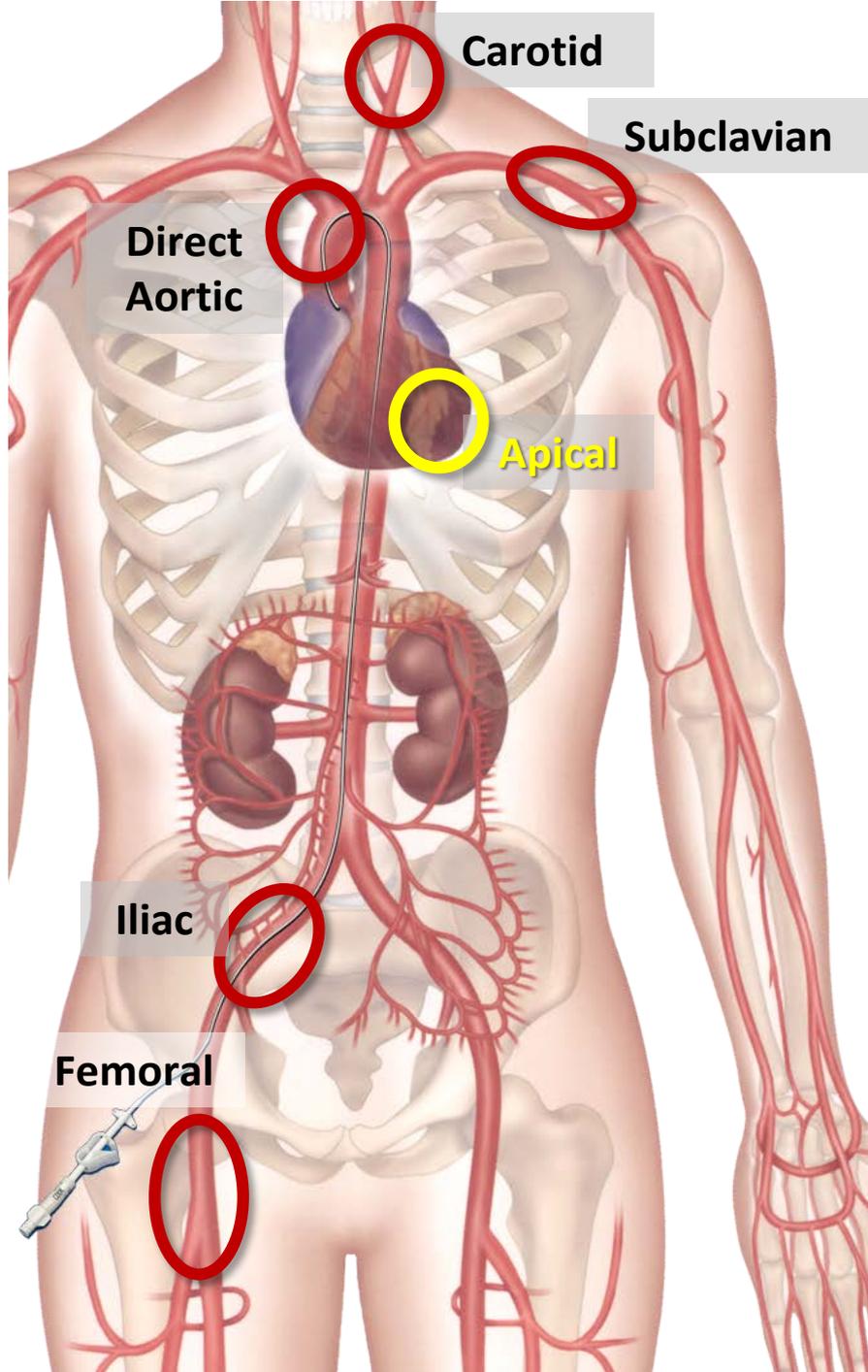
Apical

Iliac

Femoral

TAVI Approach





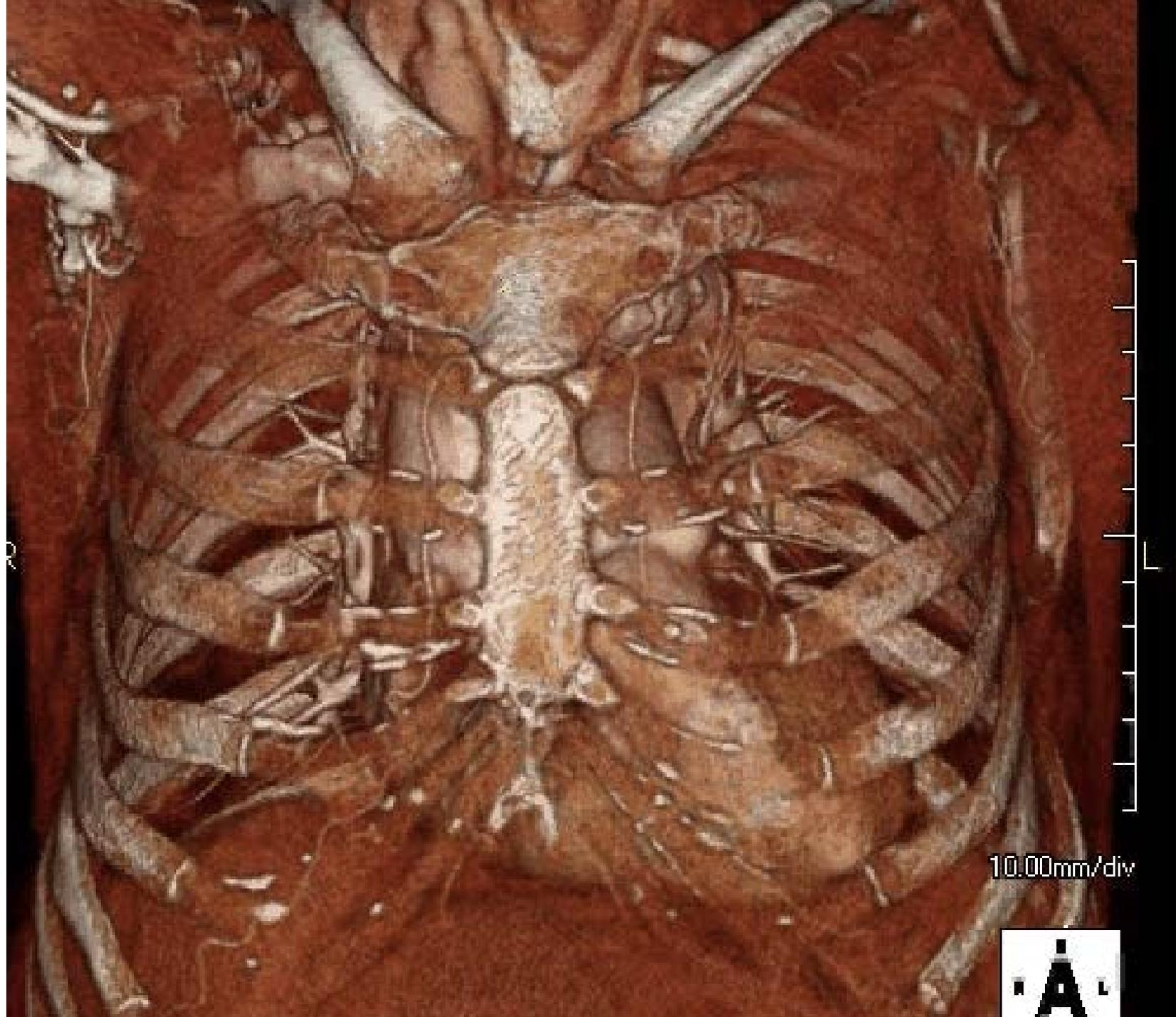
TAVI Approach





Thoracotomy





10.00mm/div

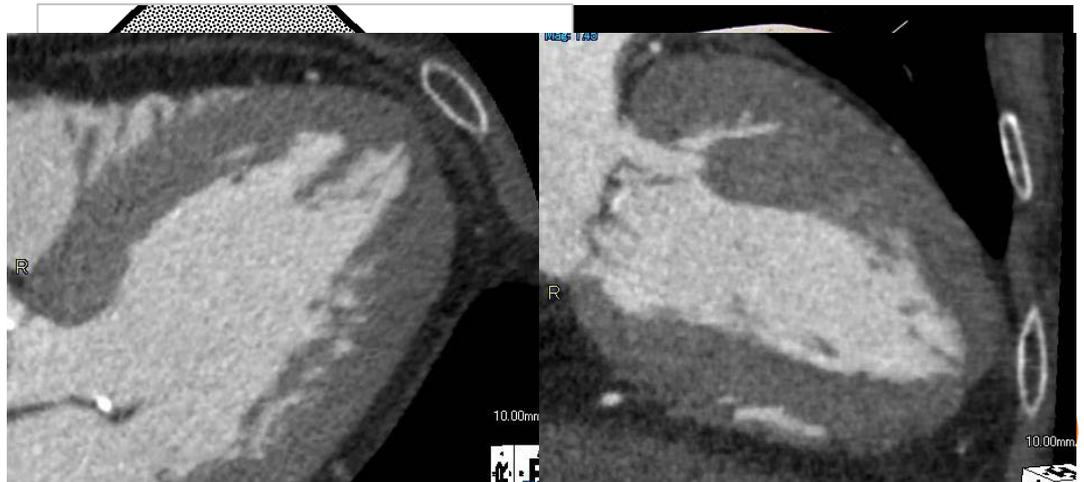
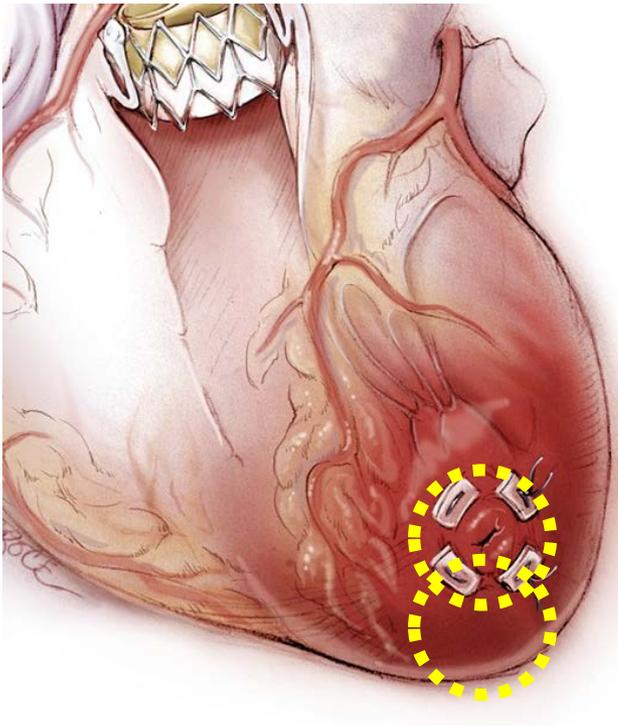


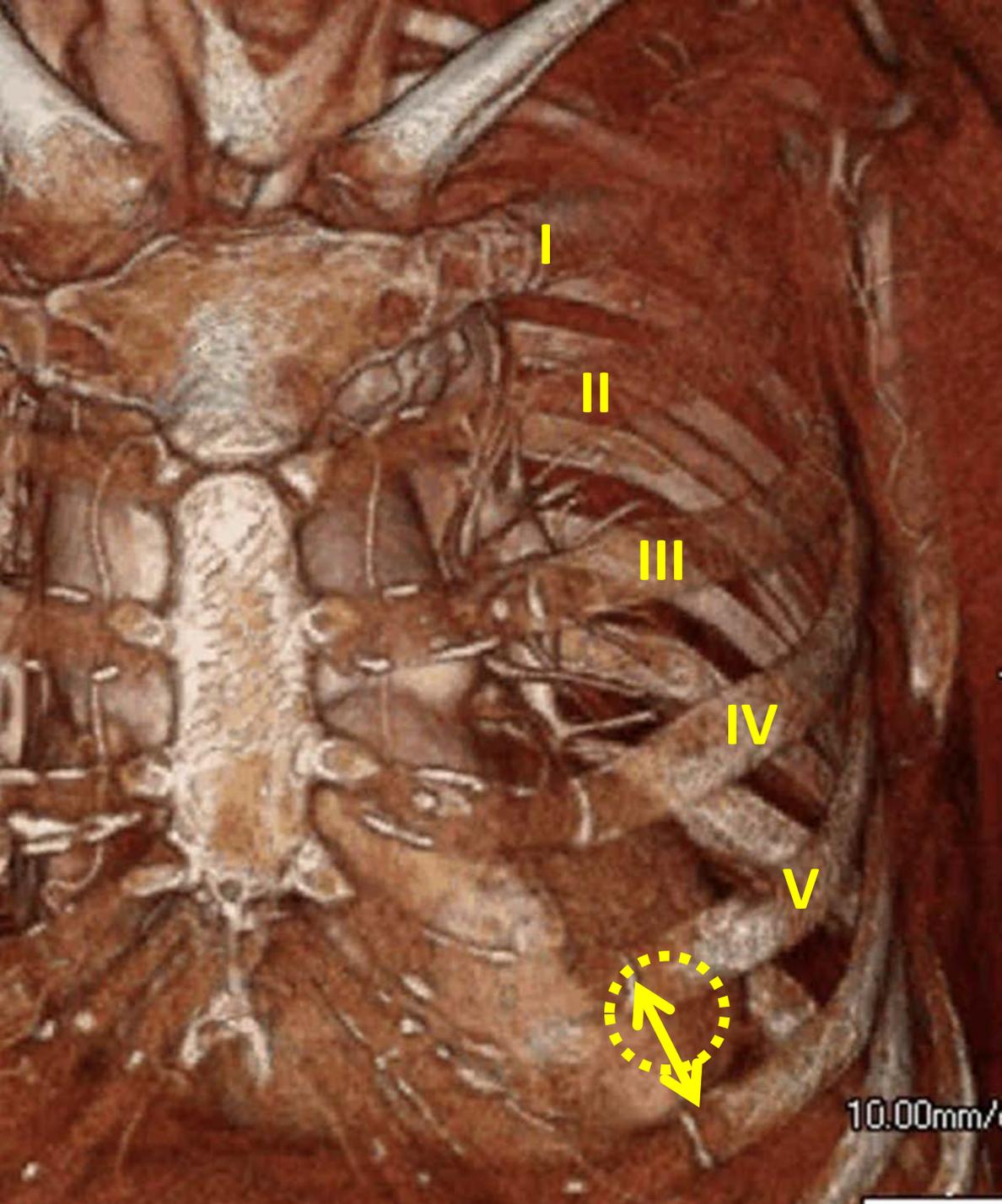
Optimal Puncture Site

Anterior wall near the apex?

Just apex?

- Coaxiality
- Papillary muscle
- Wall thickness





開胸肋間

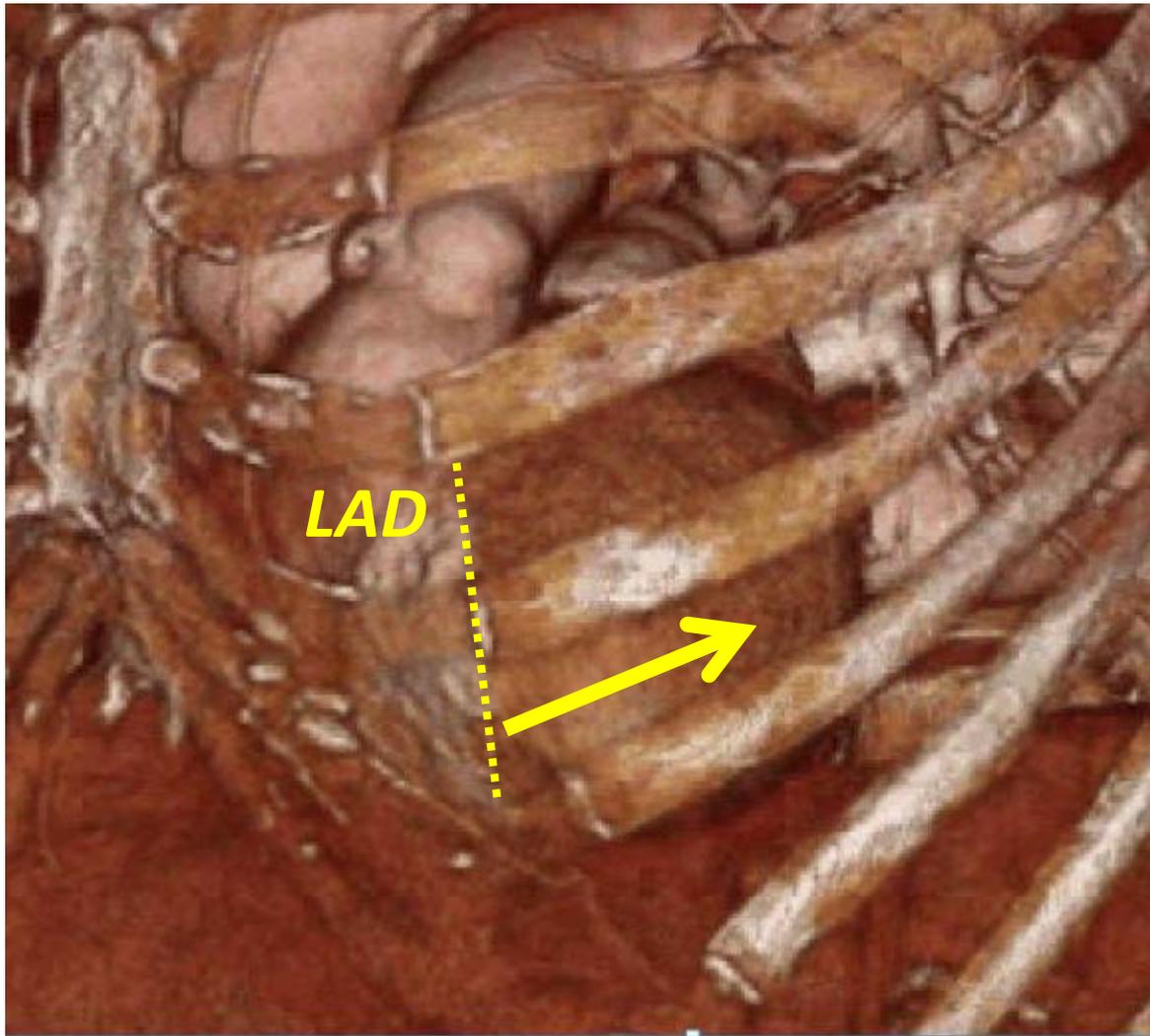
-Suture siteが真下にくる
ように

-術中エコーにて補正

-肋間の広さ



Skin Incision



-LAD routeの確認

-LADをmedialにみながらlateralへとincision



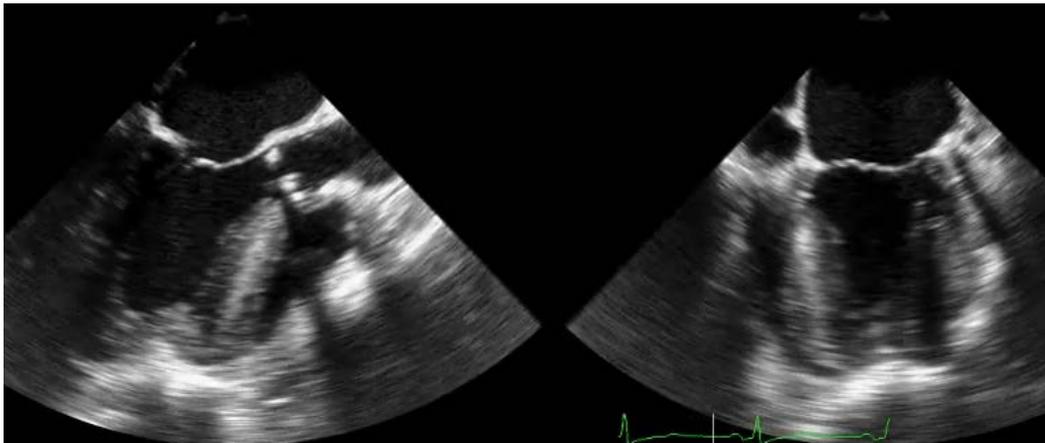
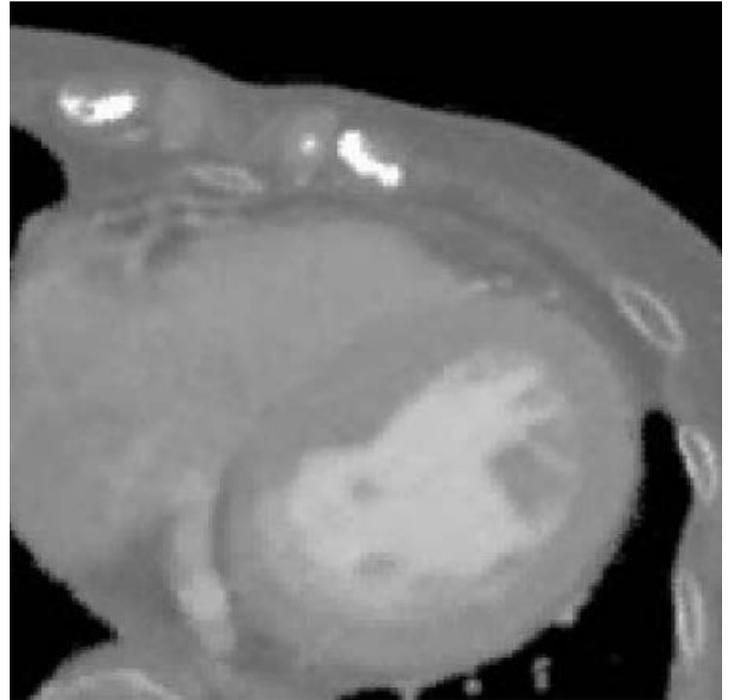
Puncture Siteの確認

-Epicardial fat tissue

-LVの確認

術中エコー

“ツンツン”テスト



開胸操作を困難にする要素

- Cardiac dimension

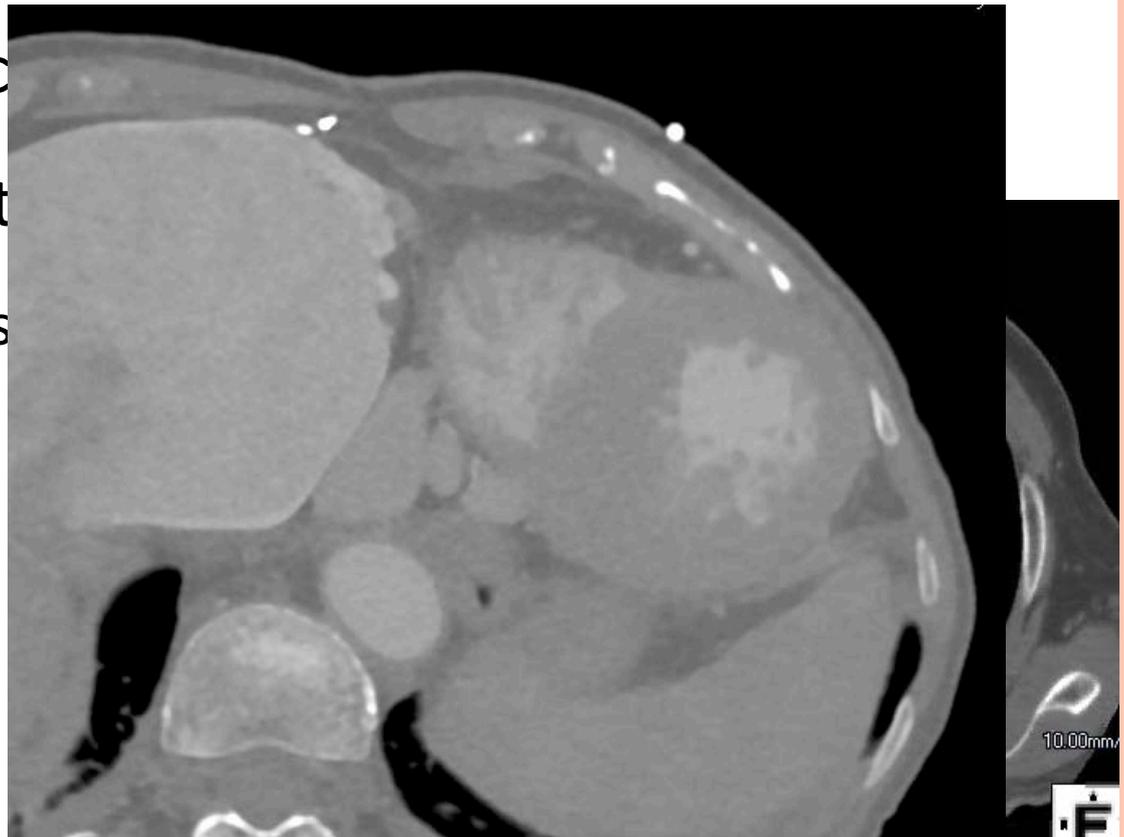
Small heart, Dilatation of right-sided heart

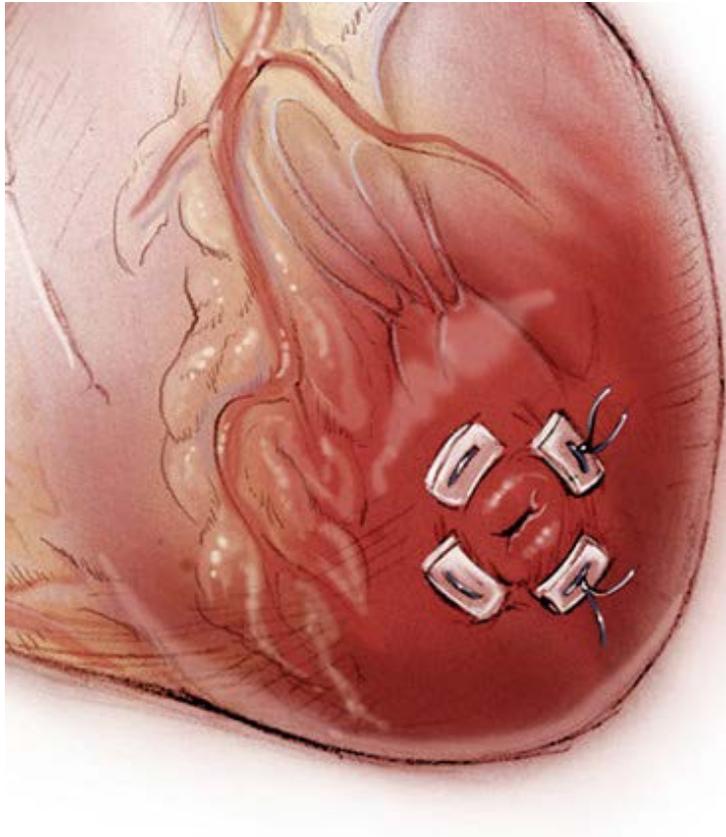
- Post pneumonec

- History of pleuritis

Tuberculosis, As

- Redo cases



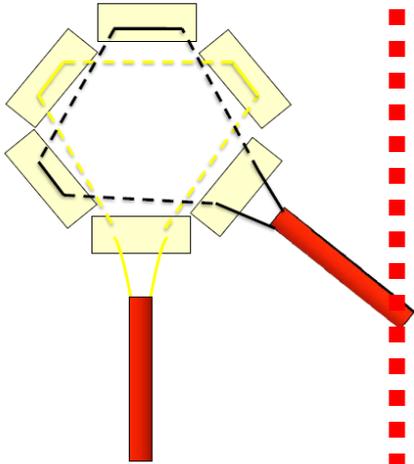


Apical Stitch

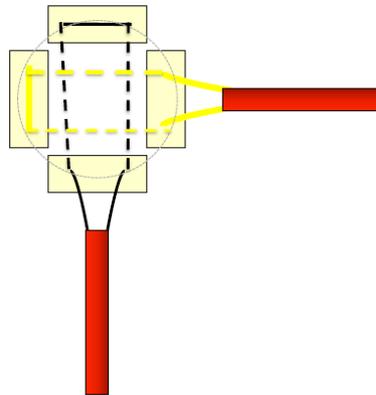


How to Stitch

Two Triangular Purse String Sutures



Two Horizontal Mattress Sutures



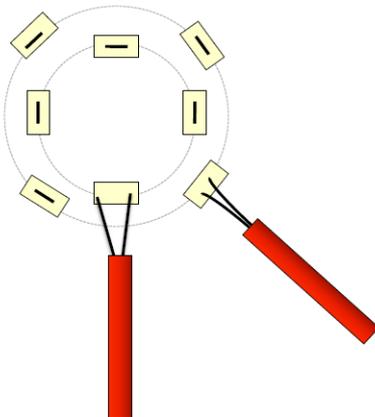
-運針法

-針糸

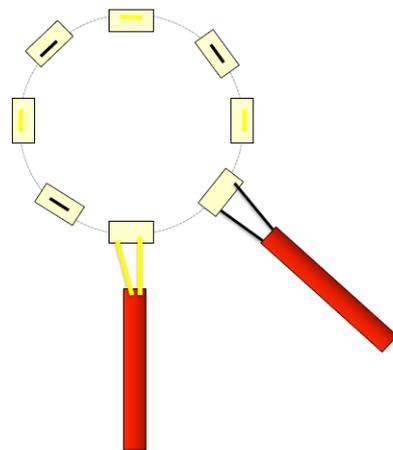
2-0 MH

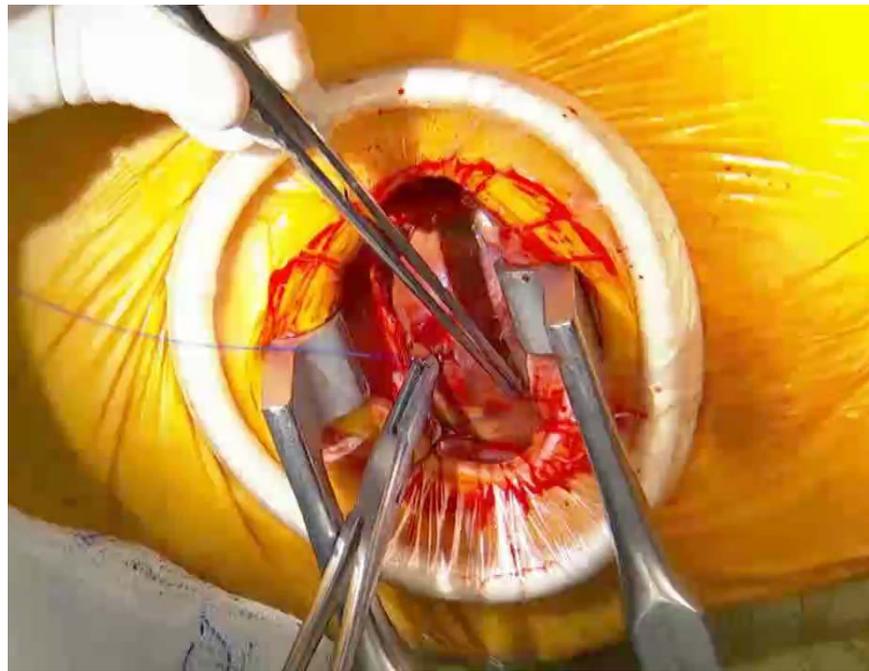
3-0 MH/SH

Two Concentric Purse String Sutures



Two Adjacent Purse String Sutures





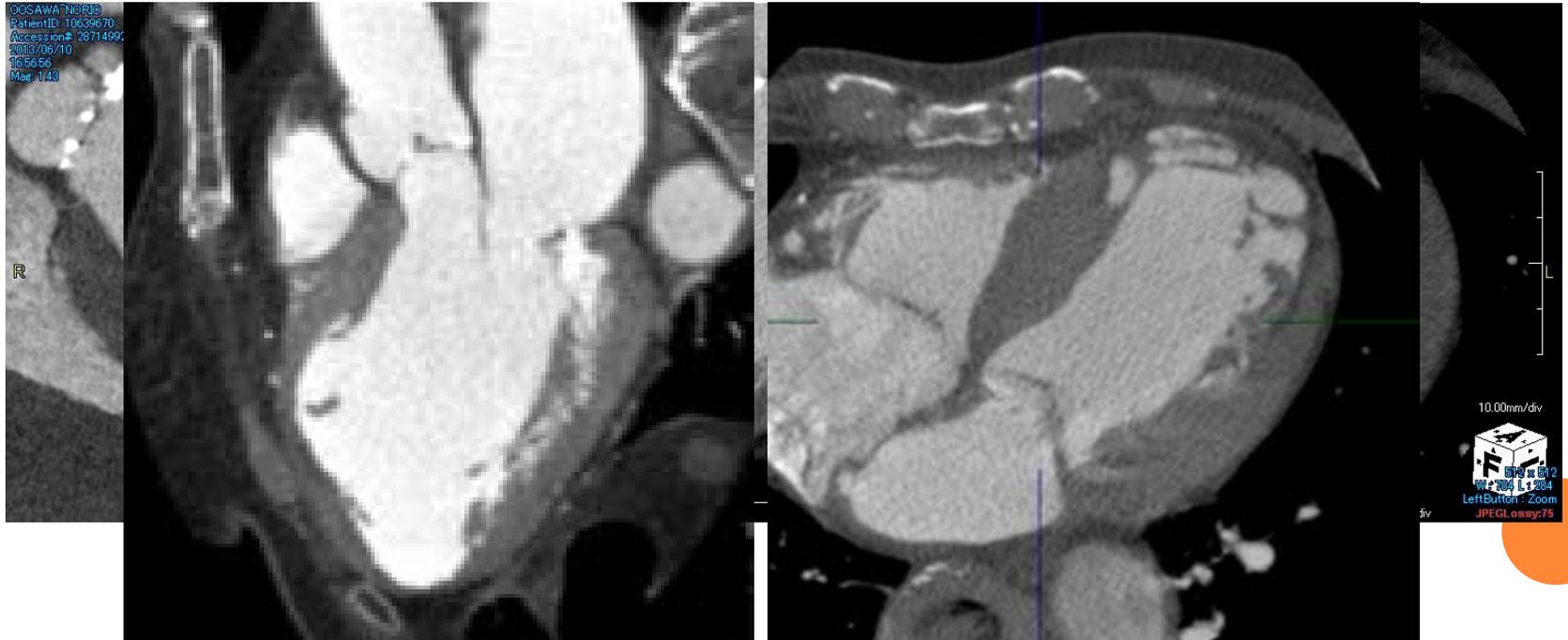
Horizontal mattress

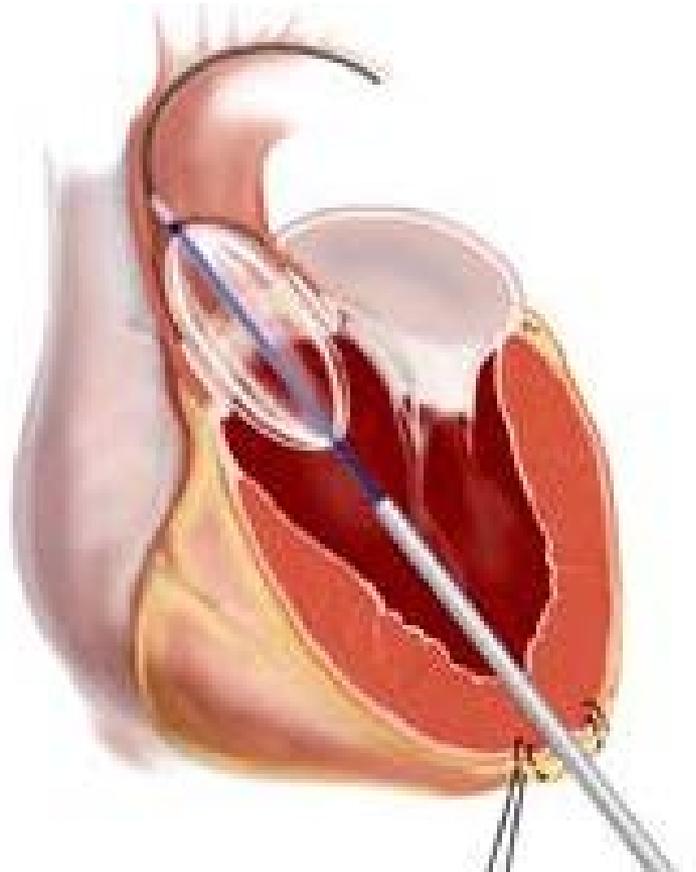
Squared PSS



Risk Factors for Apical Bleeding

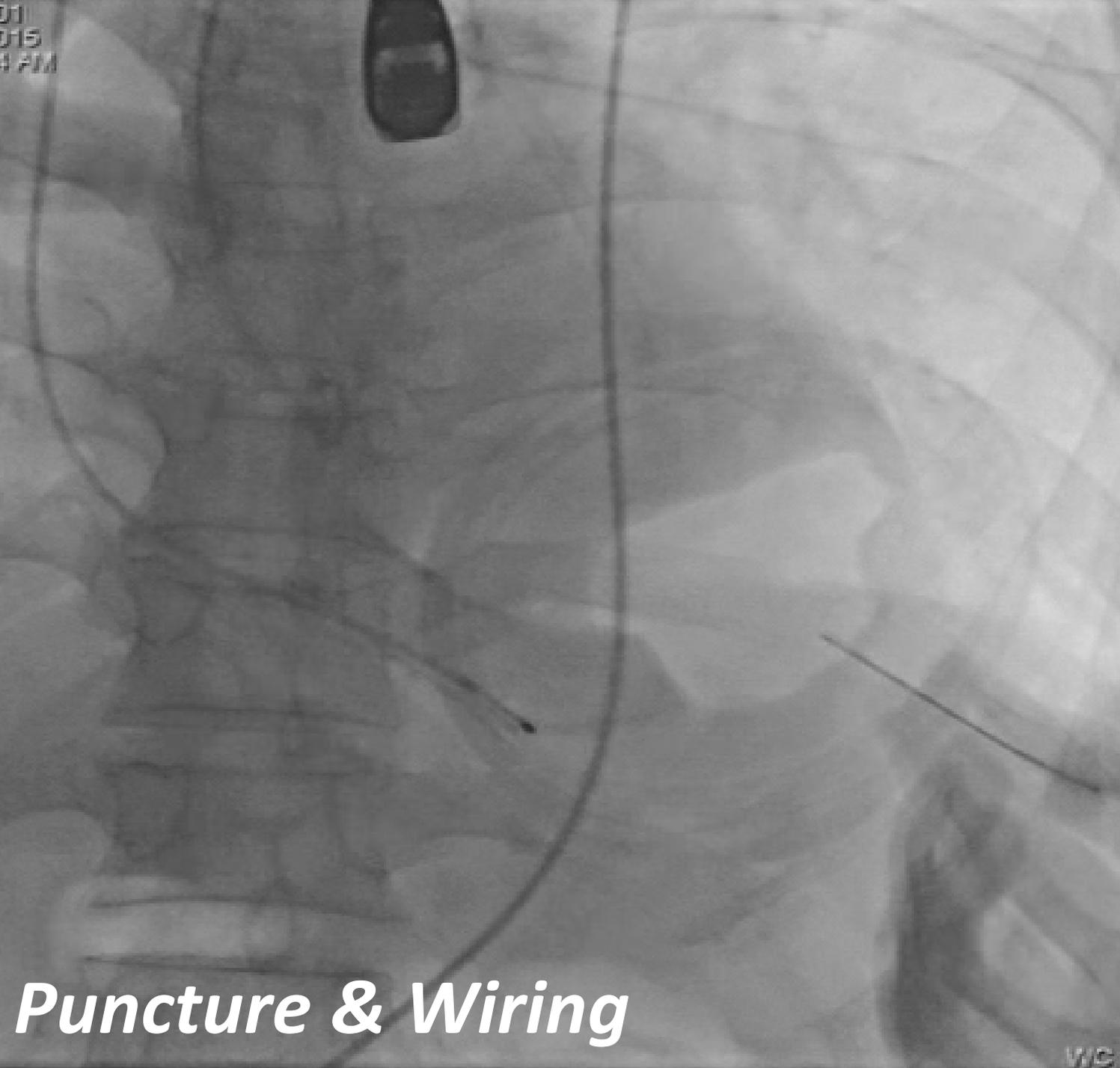
- High age
- Puncture site
- OMI
- Steroid user





Catheter Manipulation



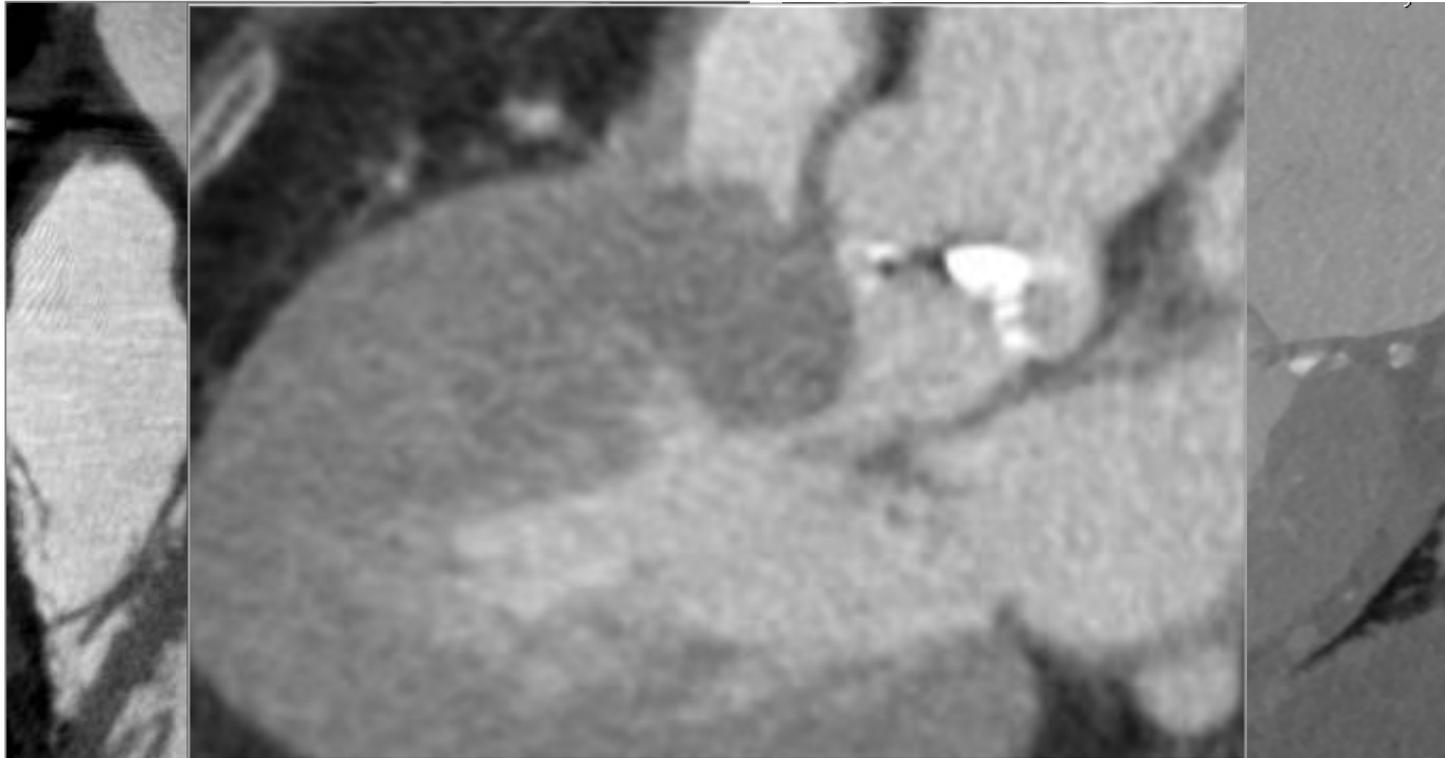


Puncture & Wiring

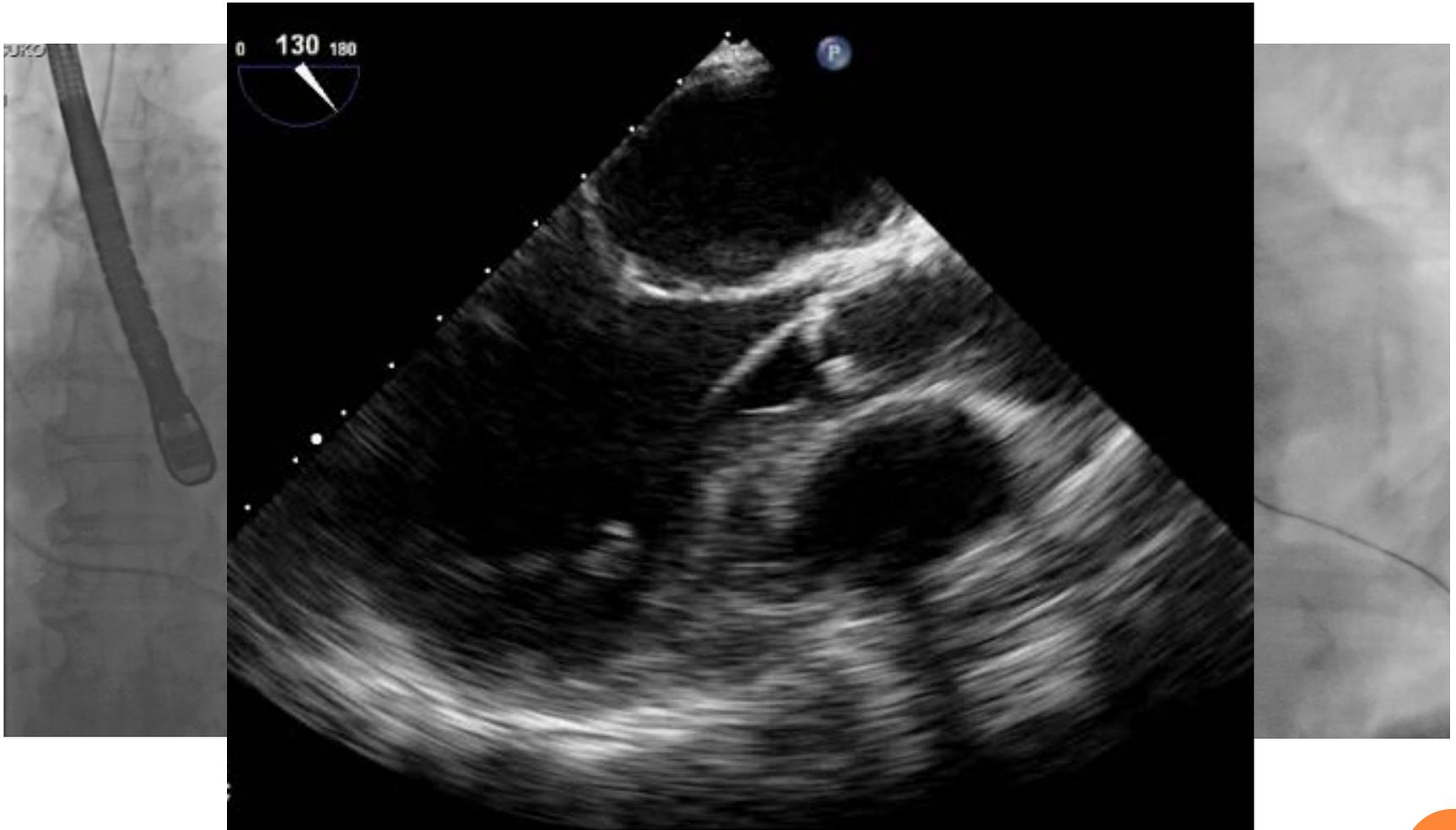


Configuration of LV Cavity

- Route from apex to Annulus
- Septal bulge



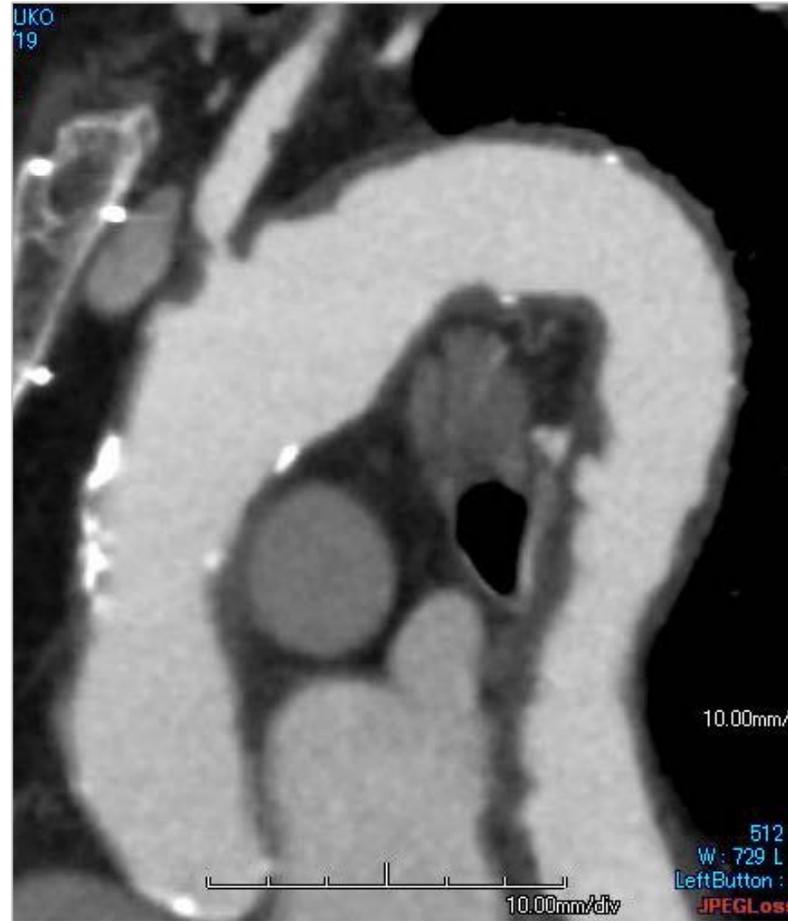
Wire Route



上に凸はダメ！

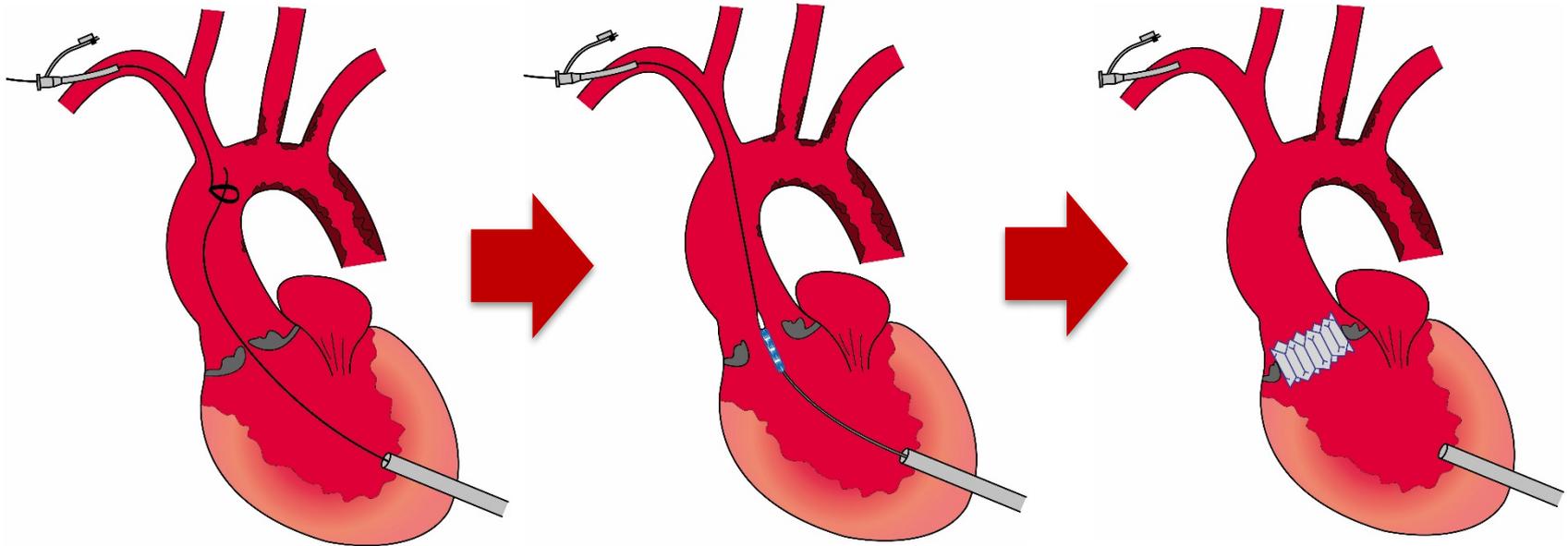


Placement of Stiff Wire



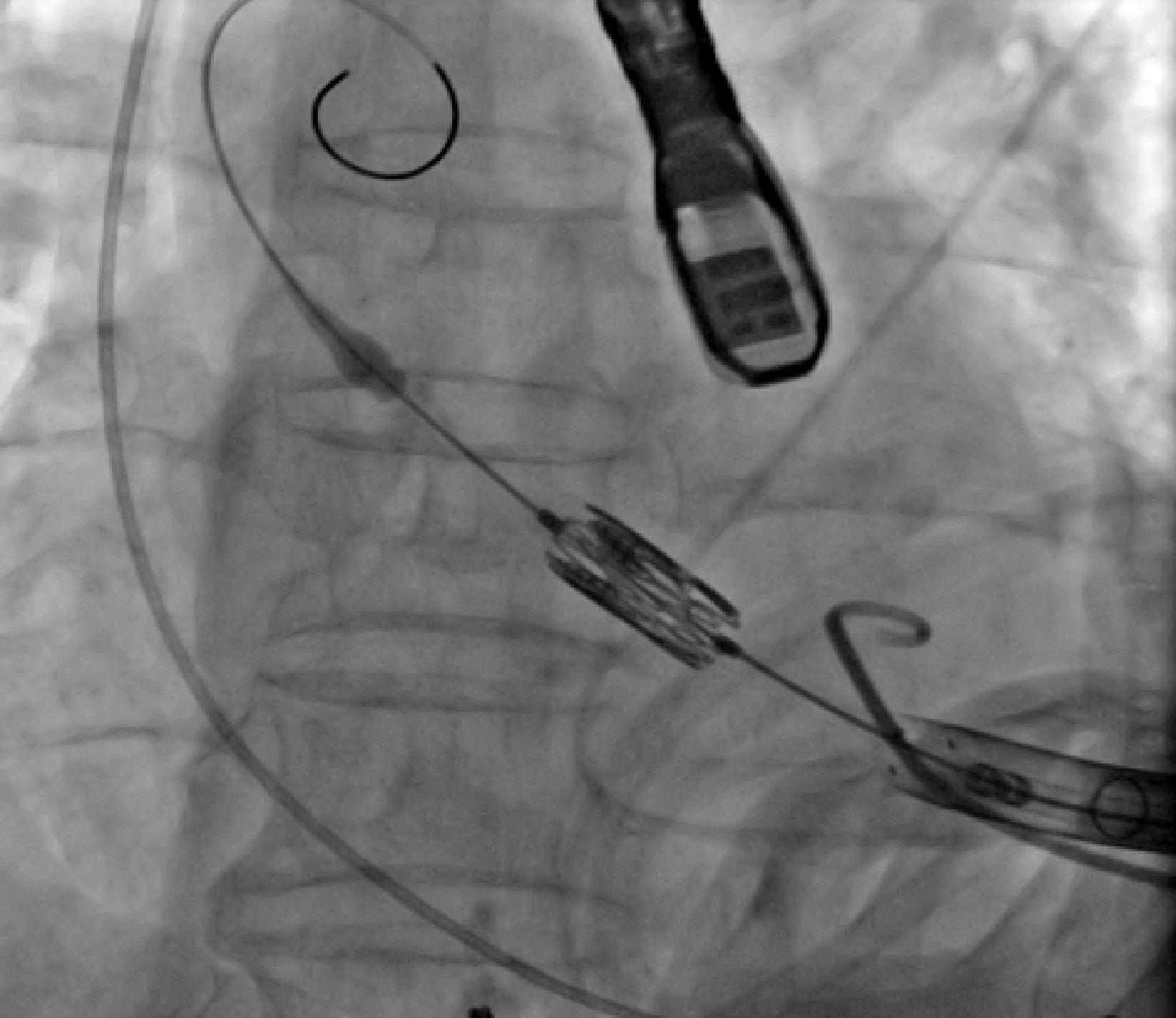
Pull-through Technique

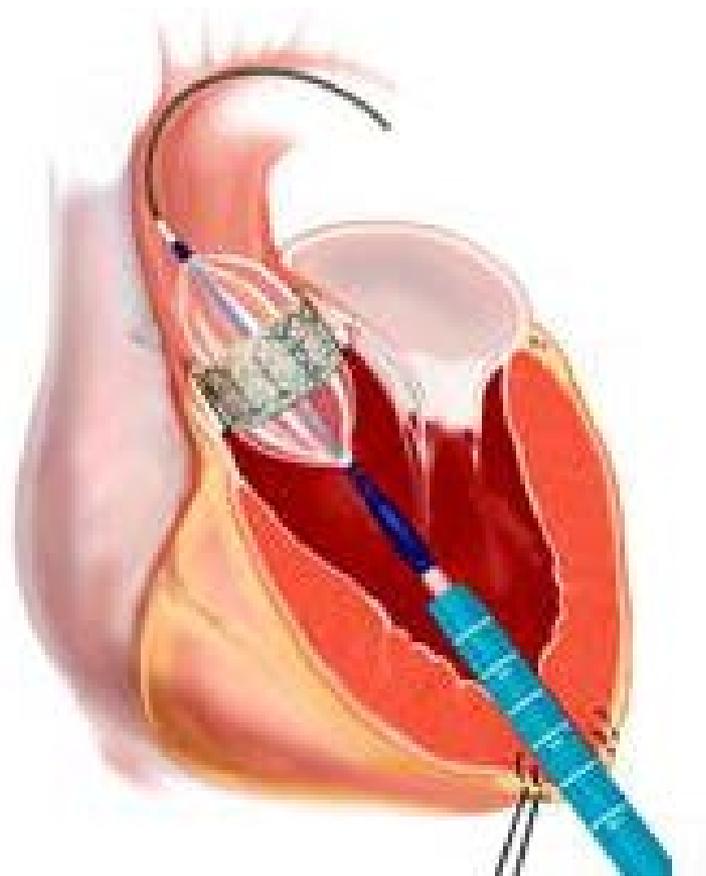
Arch non-touch Technique



-適切なneck vesselsをチェック







Implantation



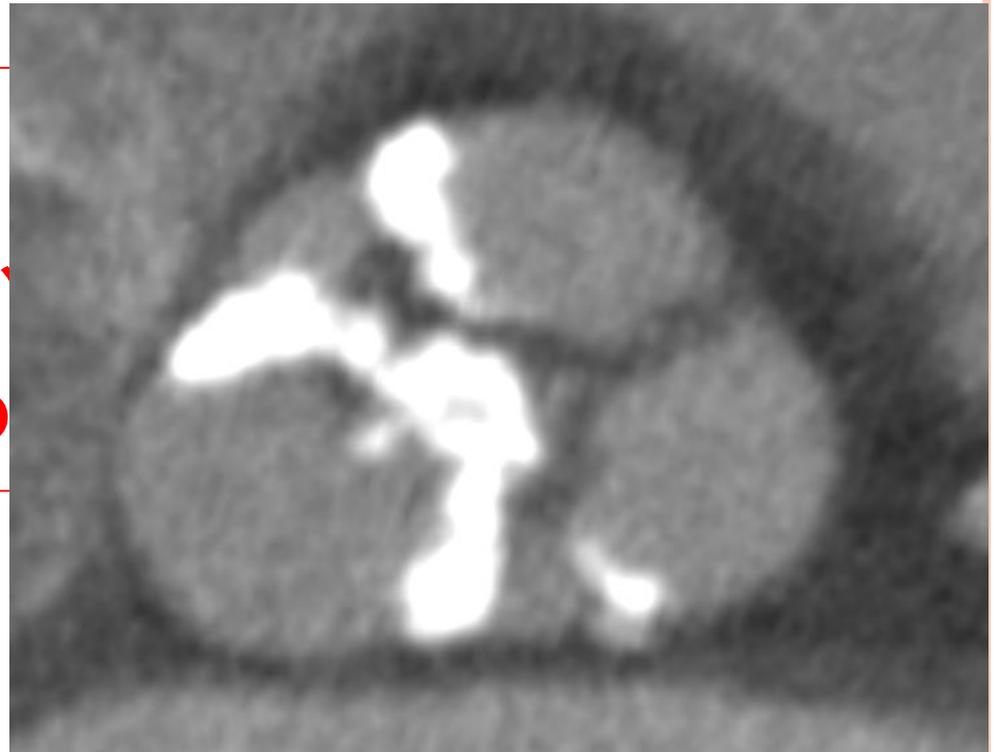
Device Cross

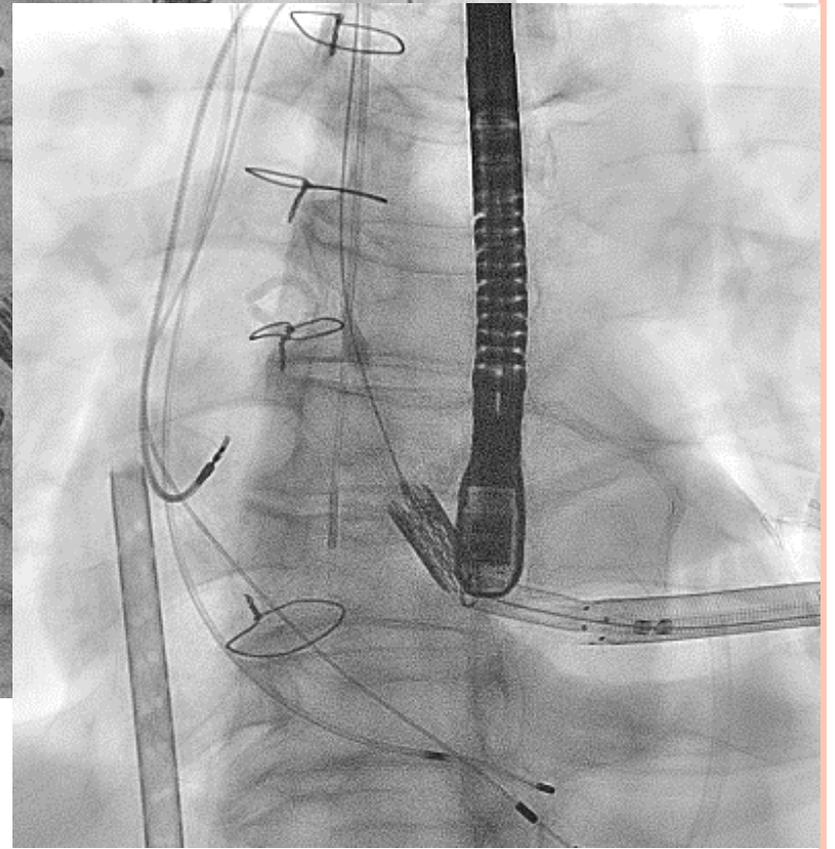
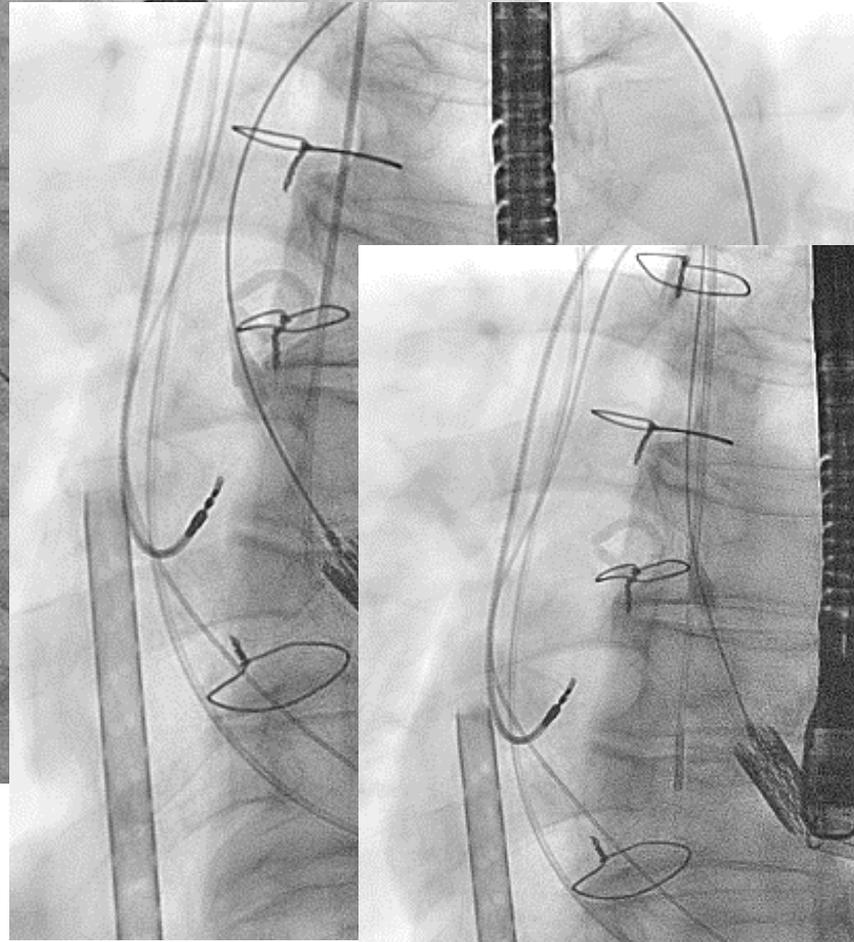
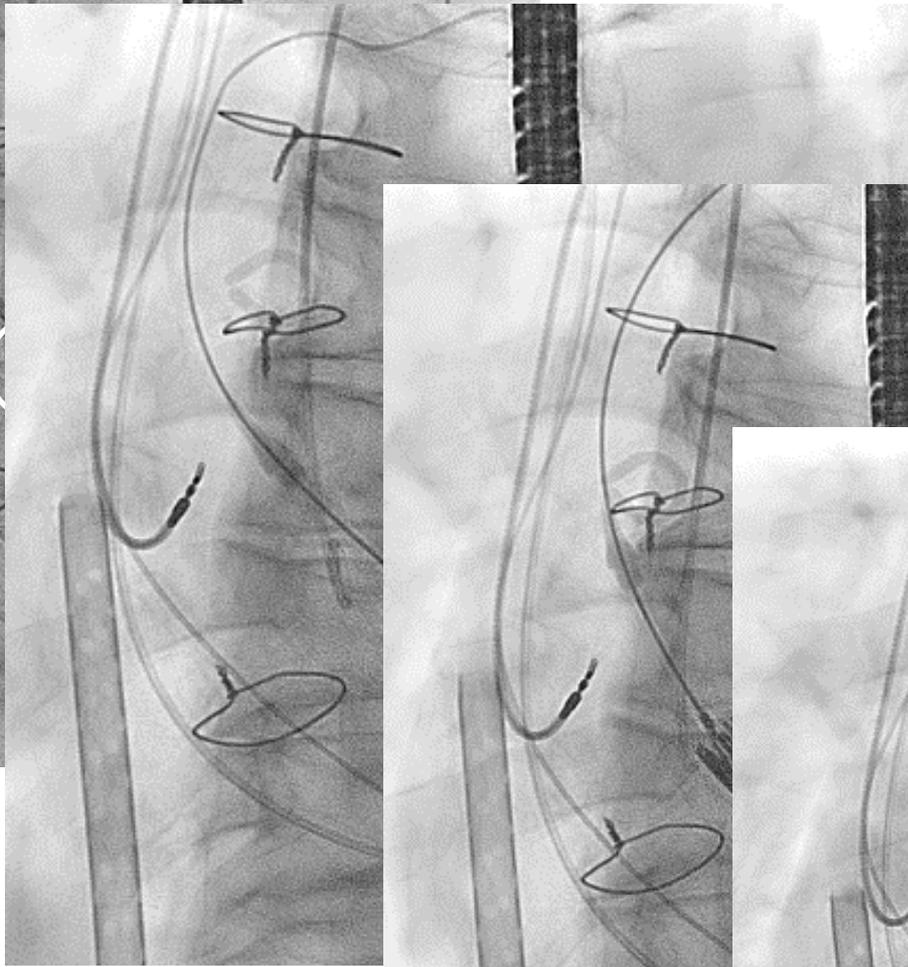
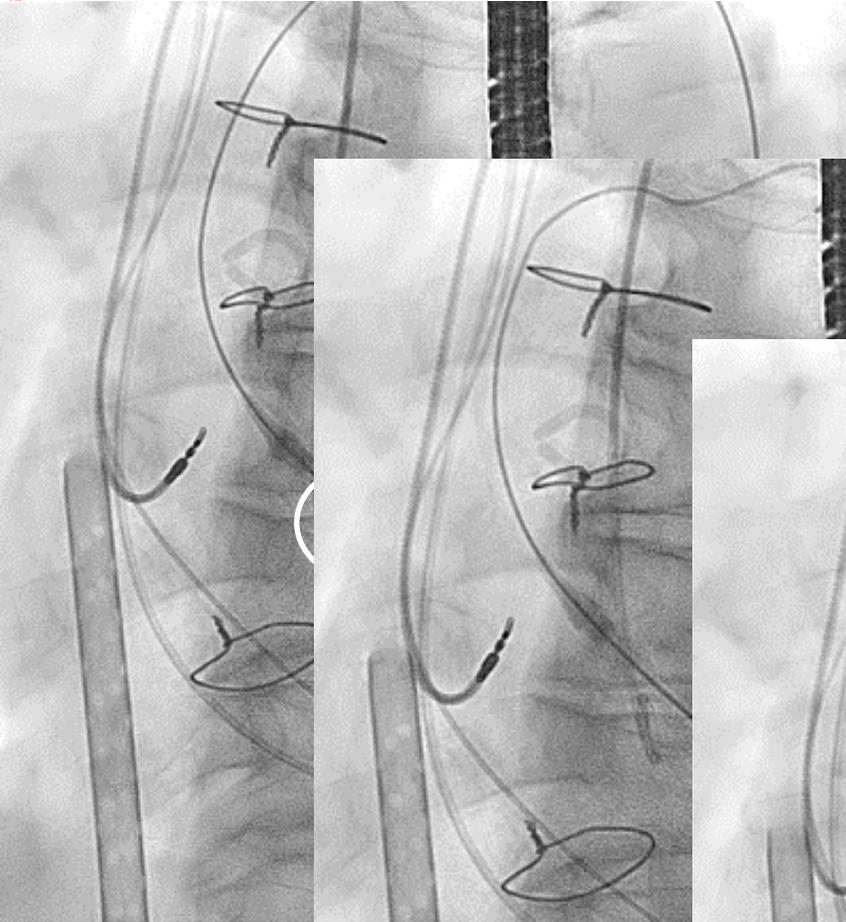
With or Without BAV ?

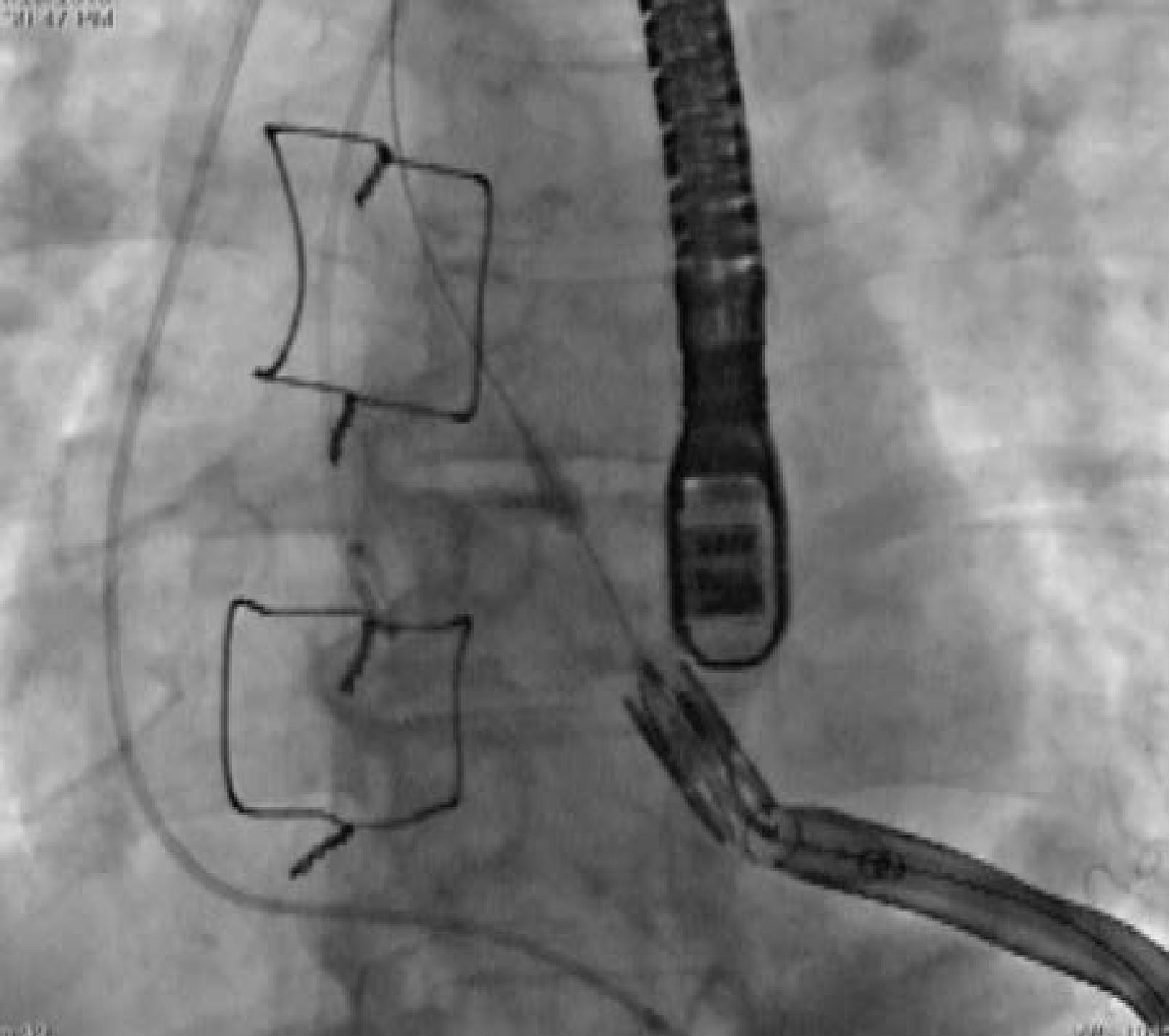
× Pre-BAV

-弁口面積の小さい

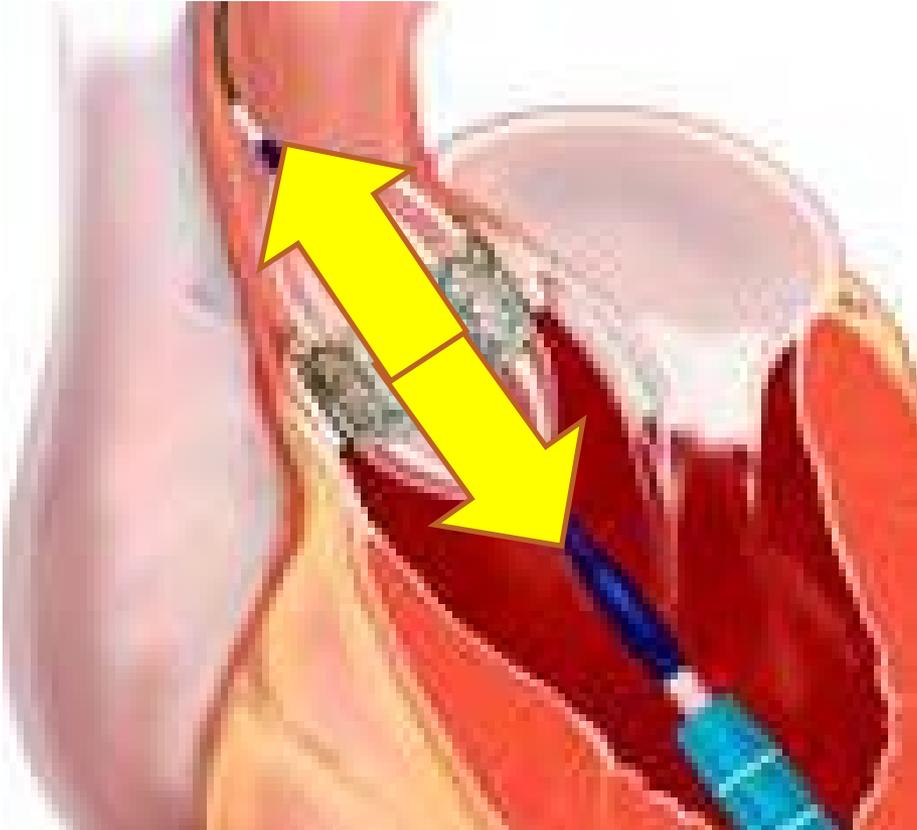
-弁尖 (特にNCC) の







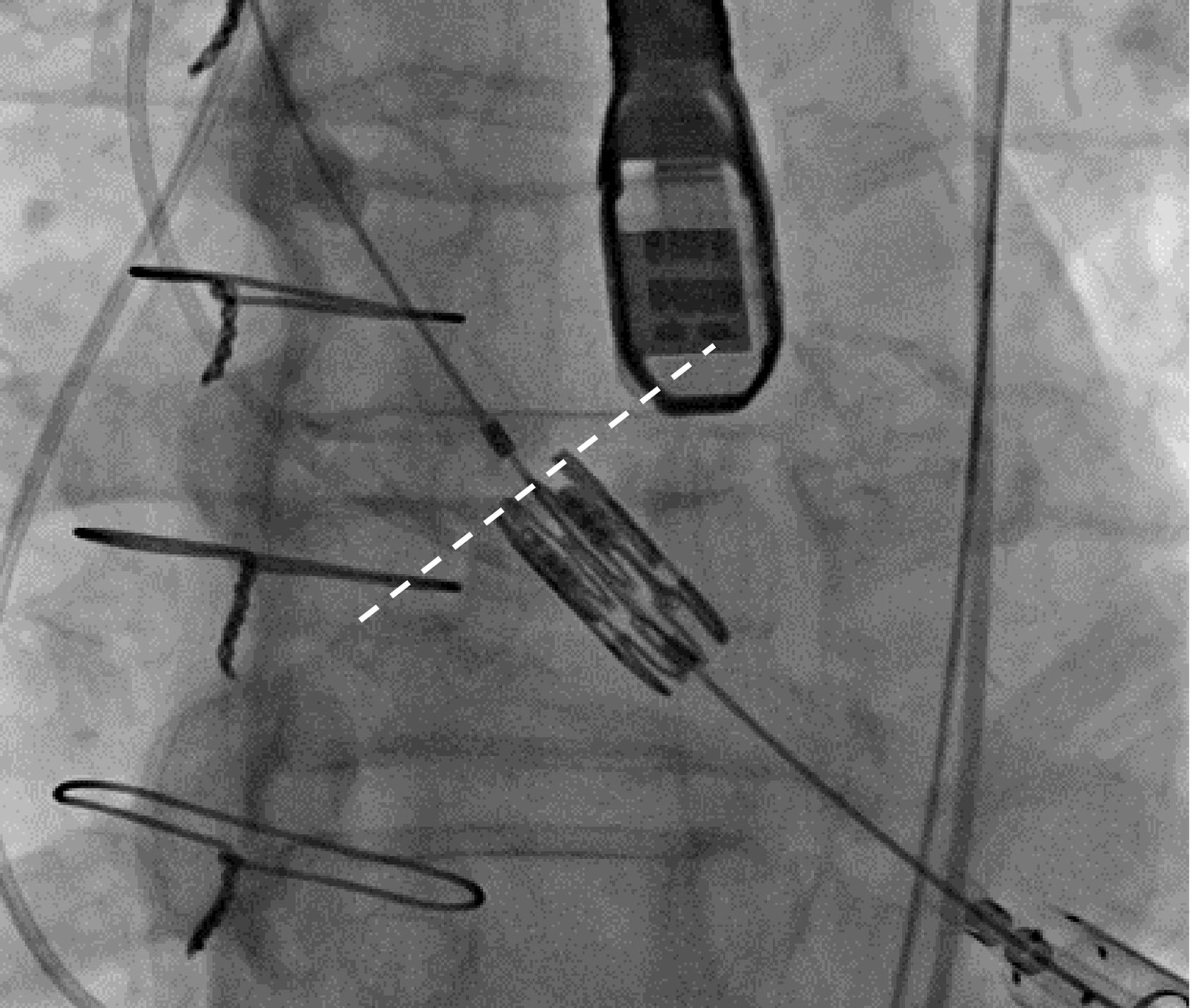
Device Implantation

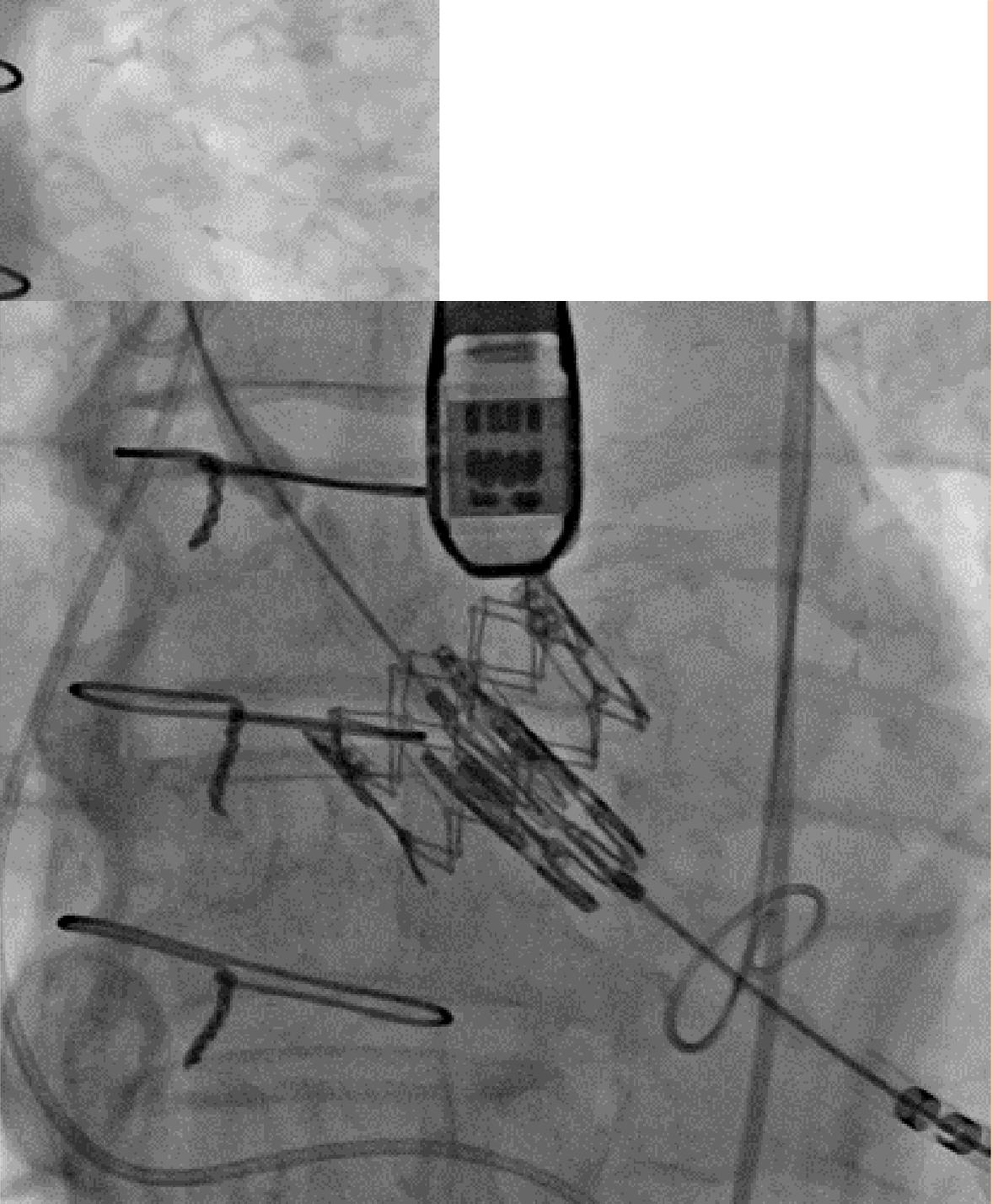
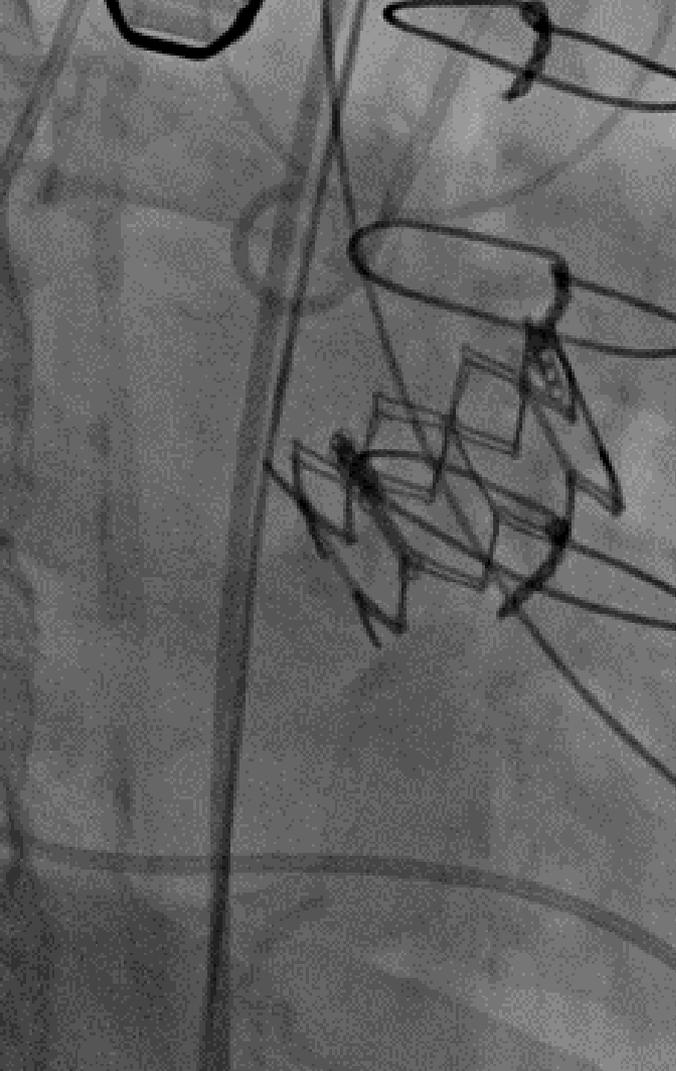


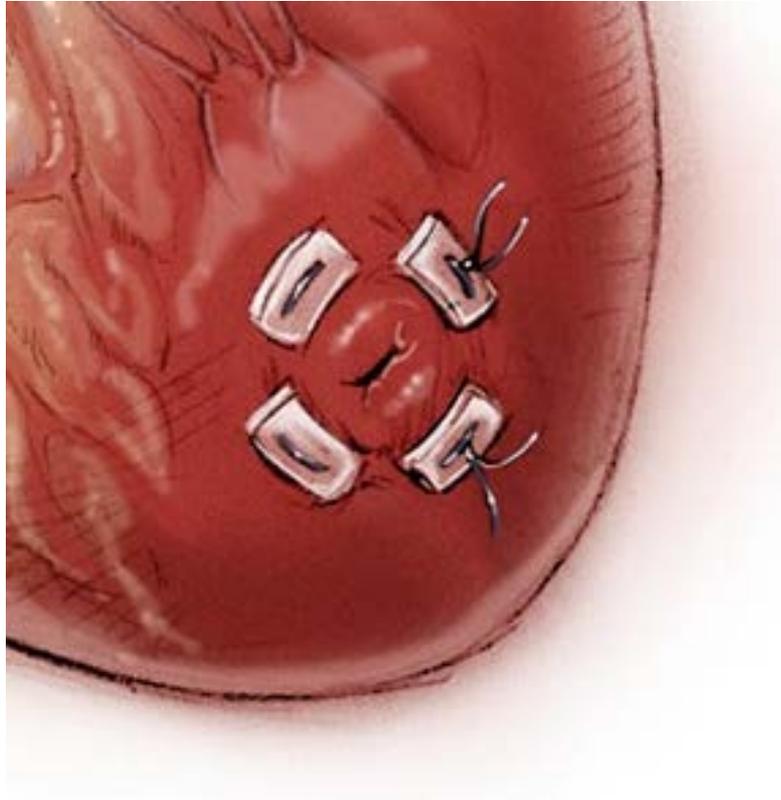
-Narrow STJ

-Sigmoid septum



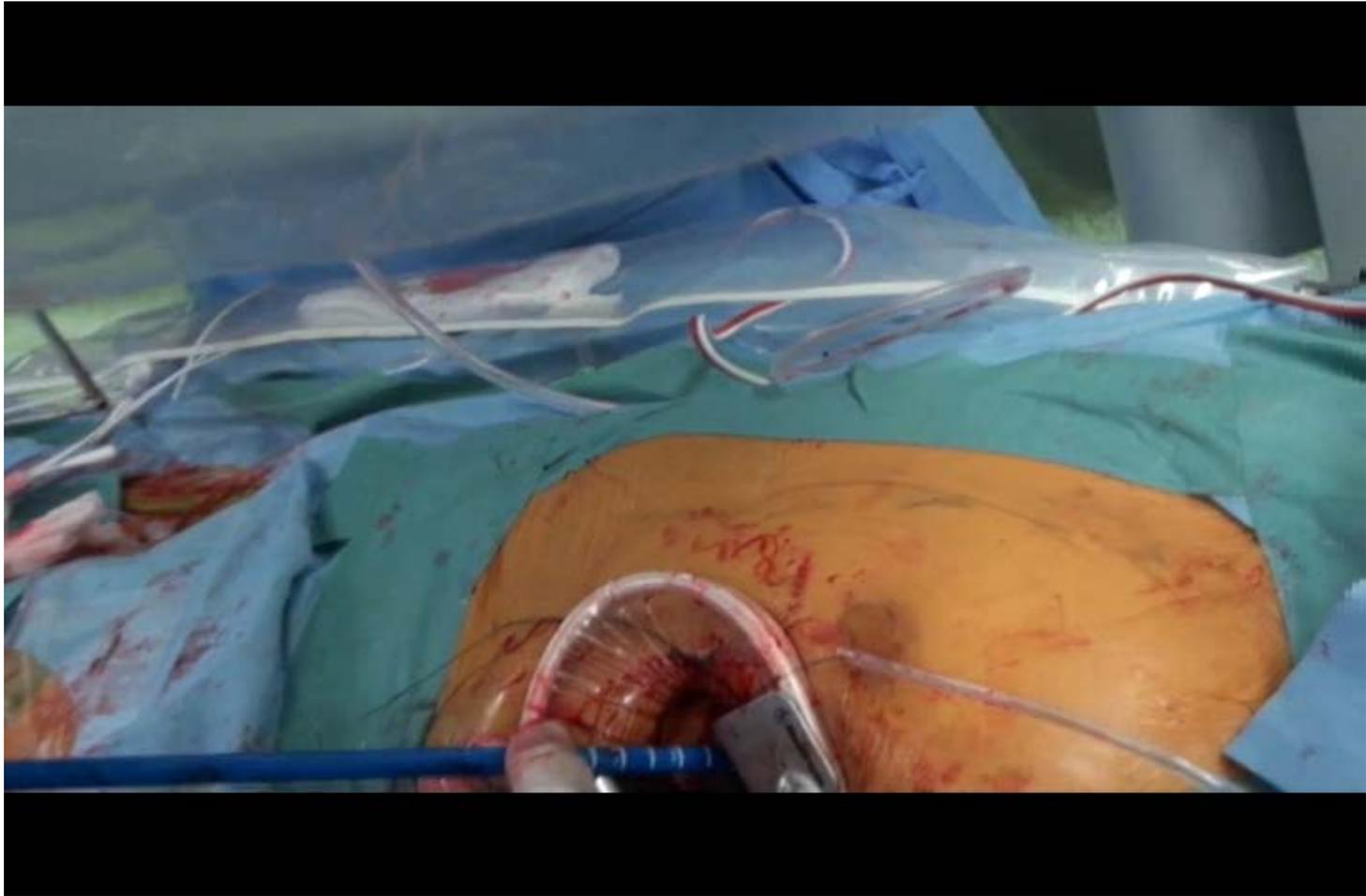






Apical Closing





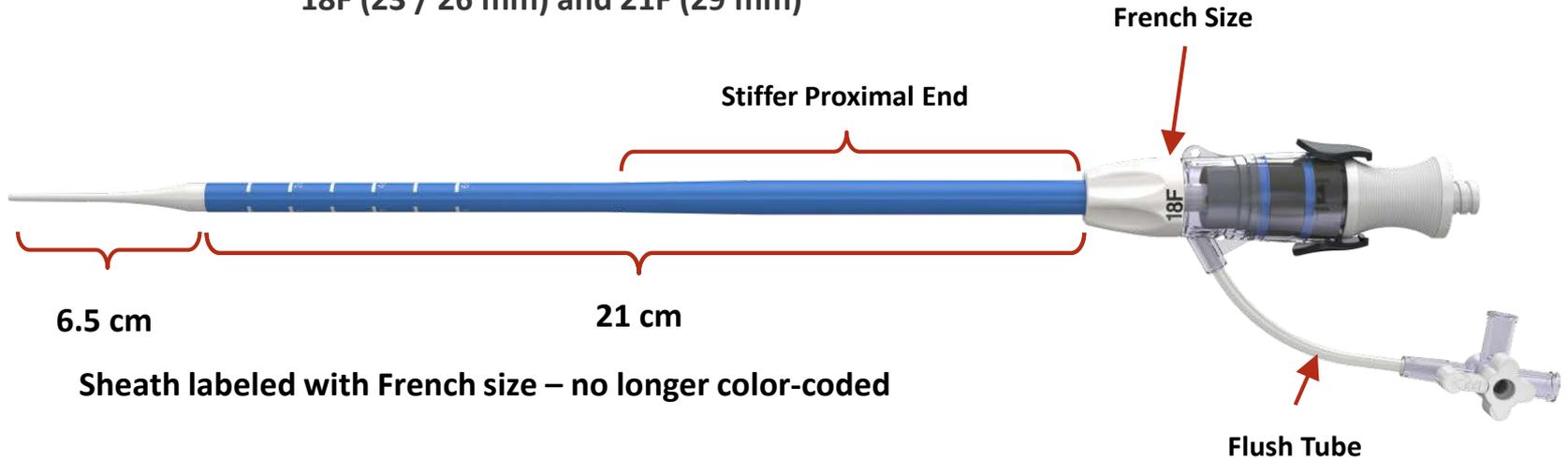
Advanced TA-TAVI



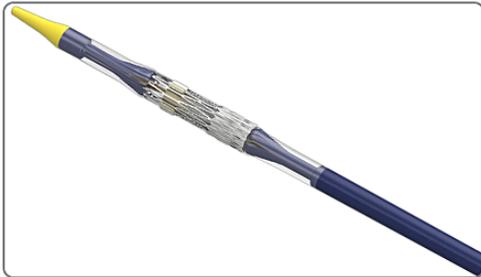
New Device: S3-TA

Certitude Sheath

18F (23 / 26 mm) and 21F (29 mm)



Sheath labeled with French size – no longer color-coded



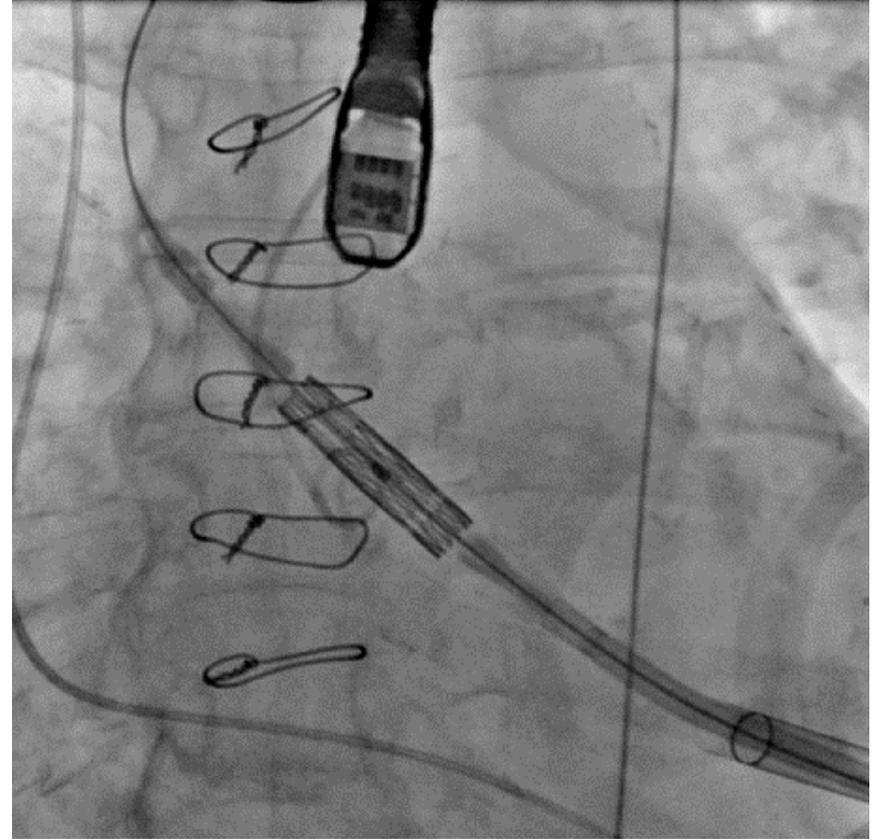
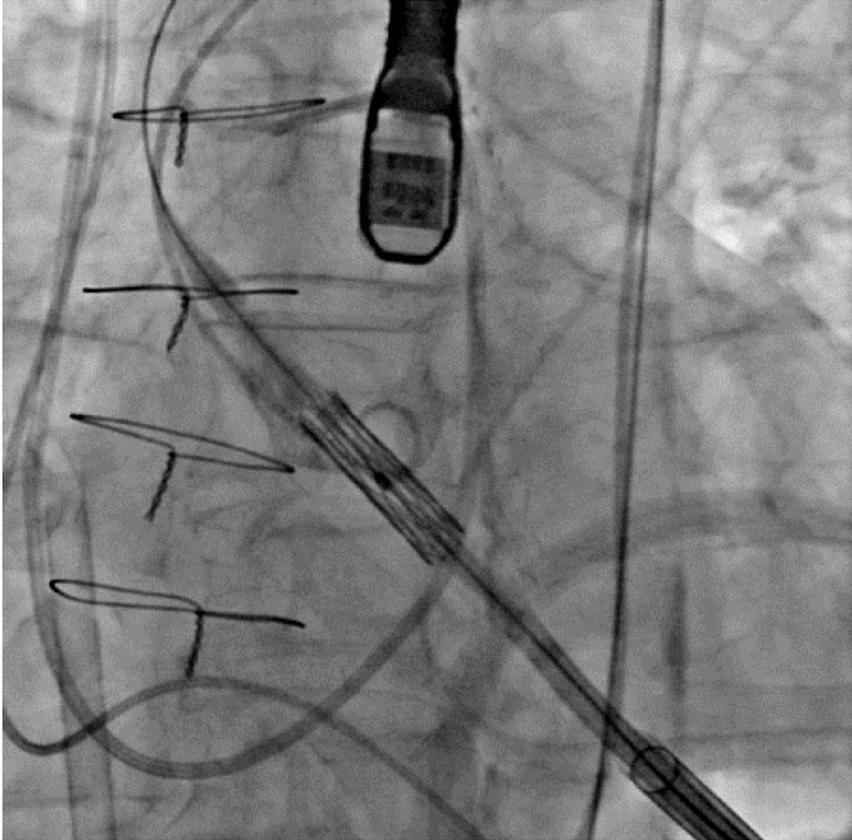
Distal Flex



Flex Wheel



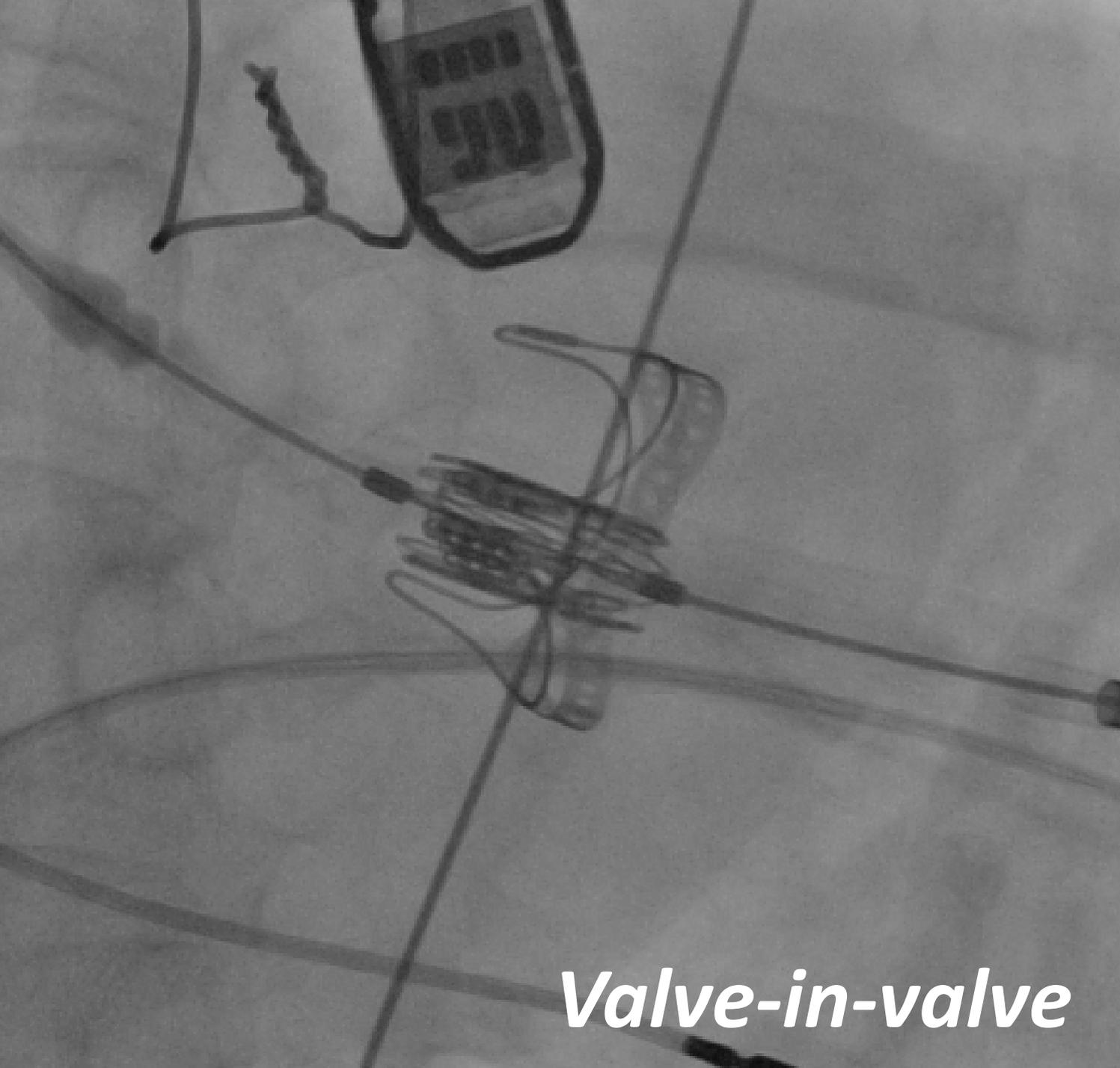
TA-SAPIEN 3 Deployment



Major bleeding ↓

Misplacement ↓



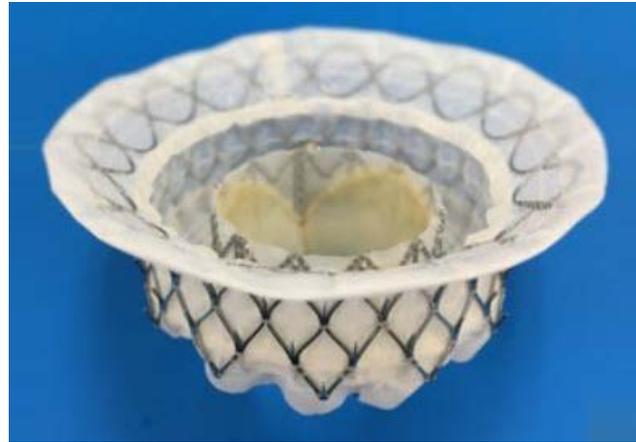


Valve-in-valve

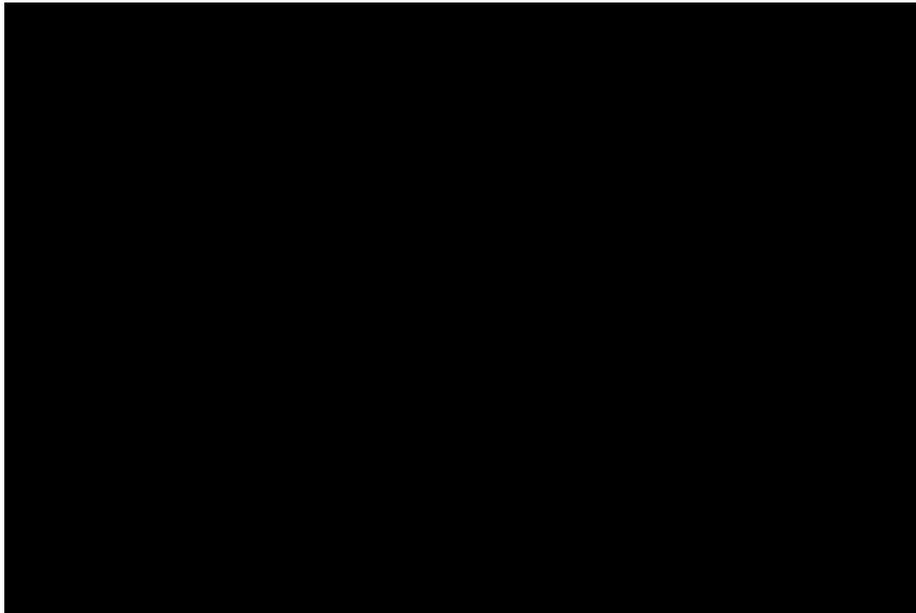


Mitral Valve Intervention

- TMVR
- Artificial tendon



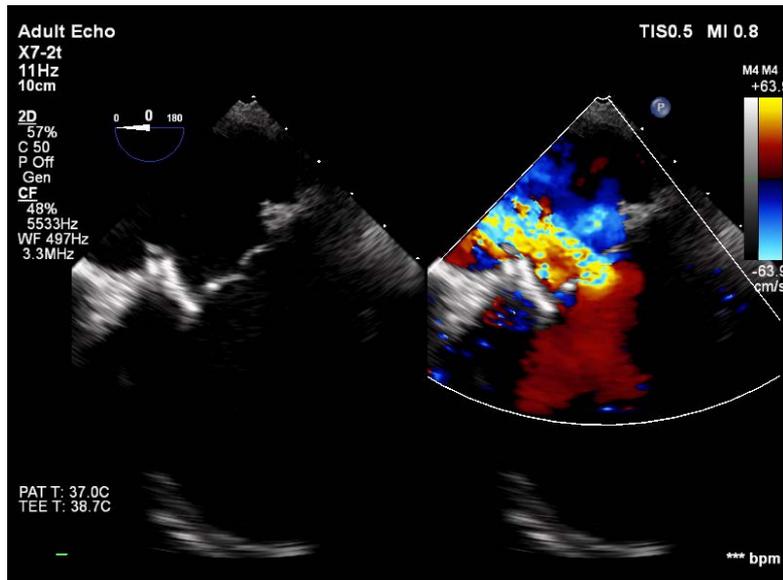
(Intrepid TMVR system: Medtronic)



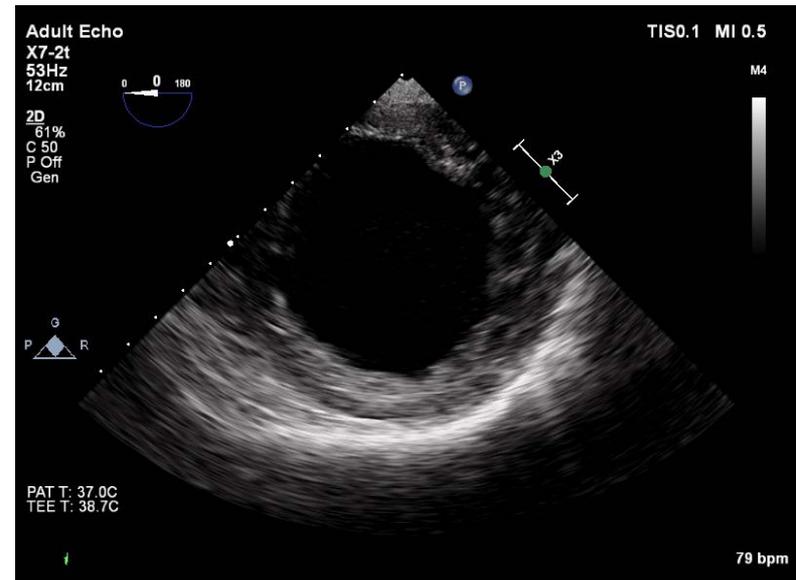
症例: 66歳, 男性 DCM

- 僧帽弁置換術 (CEP 27mm), 骨格筋採取
- 筋芽細胞シート移植
- CRT-D植込み for NSVT
- 心不全症状出現。僧帽弁位人工弁でsevere MRあり。
- STS-PROM: 11%

TEE

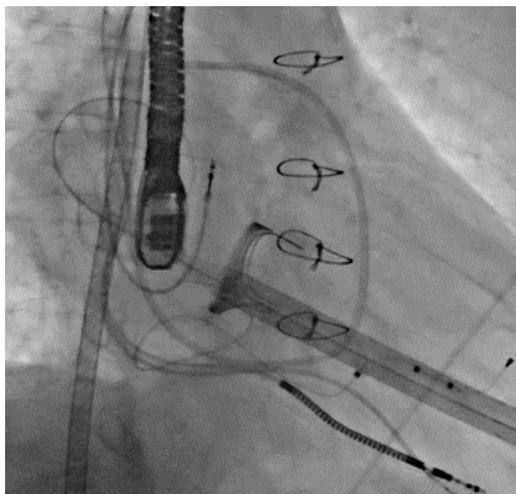


Severe MR



EF 23%

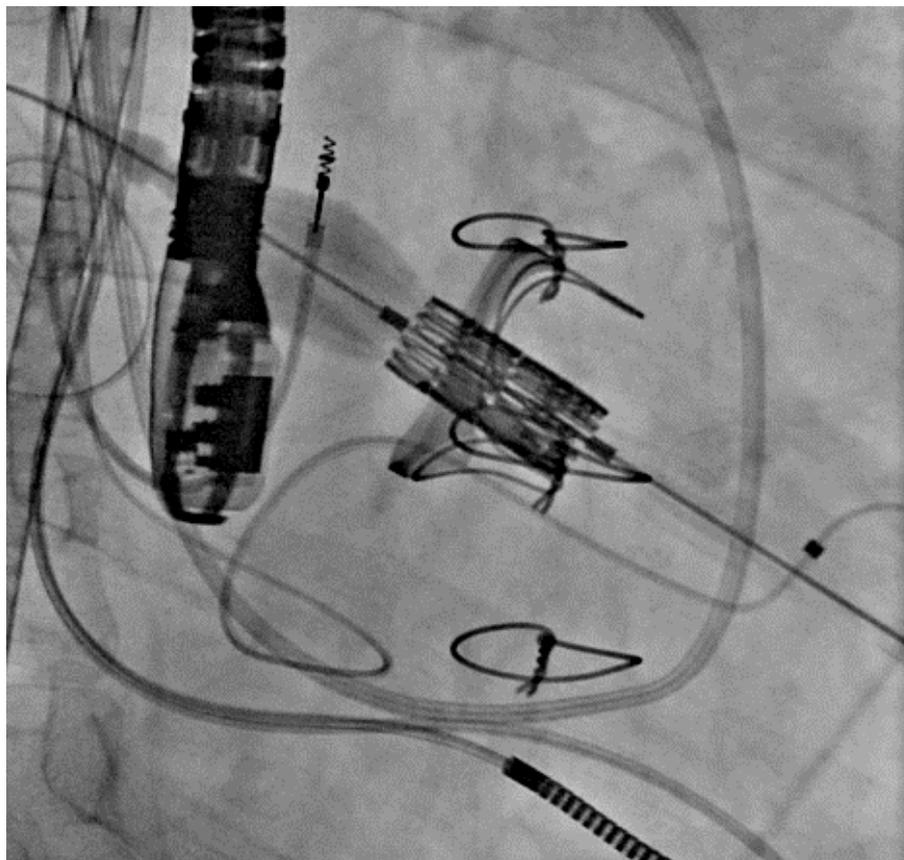
Trans-apical Mitral Valve-in-Value (臨床研究)



- 経心尖部アプローチ (第6肋間)
- Stiff wireをLA内に留置
- ECMO補助下



-心膜剥離せず, 巾着縫合をおいた



- Rapid pacing下にSAPIEN XT 29mmを植込み
- TEE: Trivial leak
- ECMO離脱可



Take Home Message

経心尖部アプローチは、有用なTAVRアプローチの一つで、SHD intervention時代を迎えた今、その手技を体得することは必須である。



ご清聴ありがとうございました。

