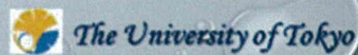
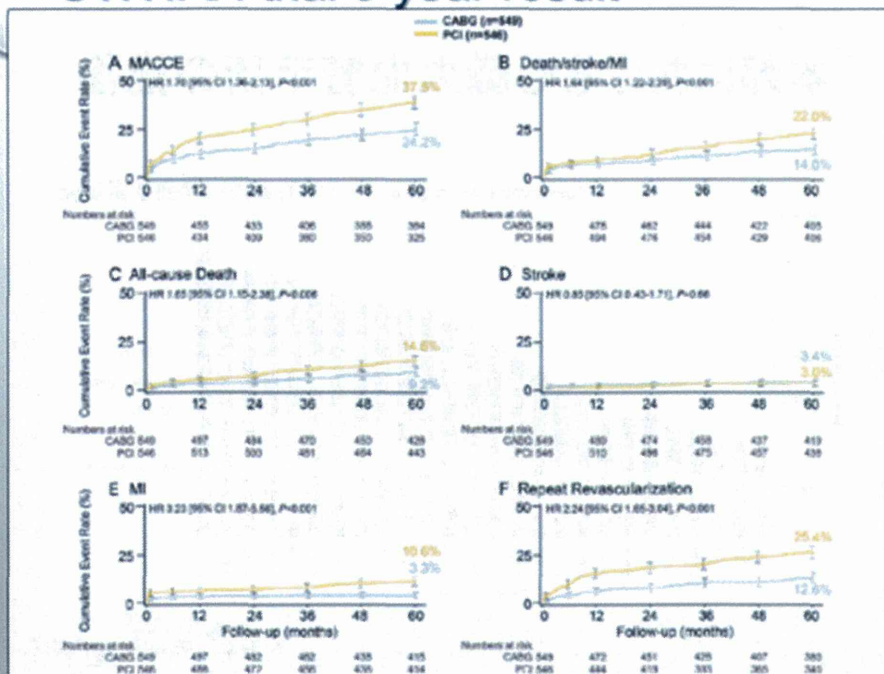


# 虚血性心疾患

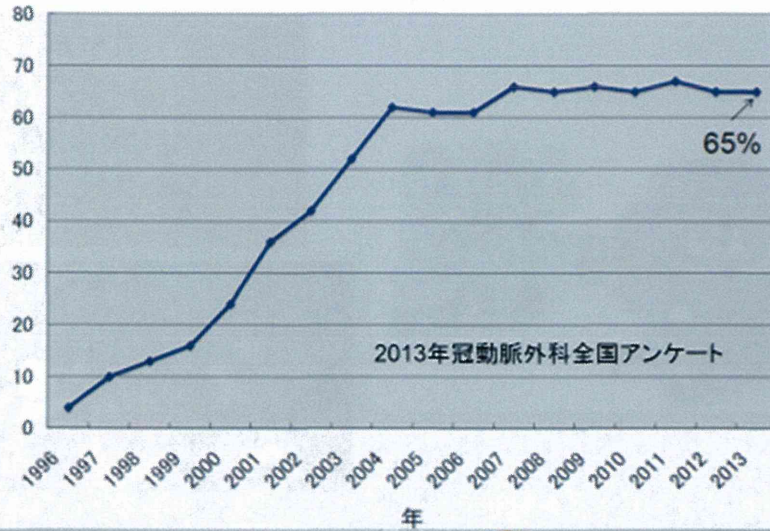


## SYNTAX trial 5-year result

*Eur Heart J 2014*

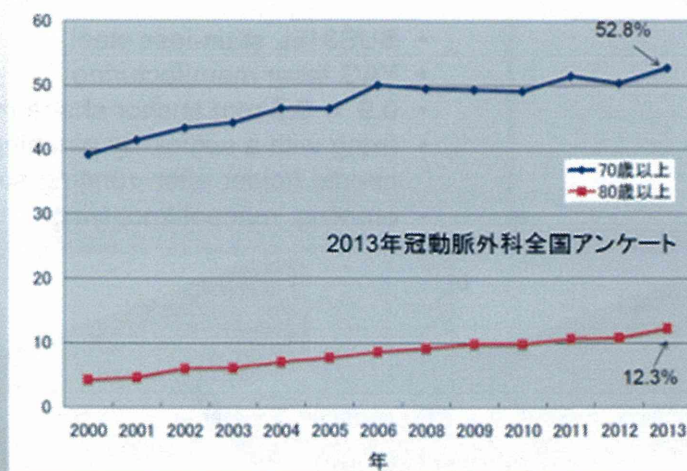


## 本邦におけるoff-pump CABGの動向



The University of Tokyo

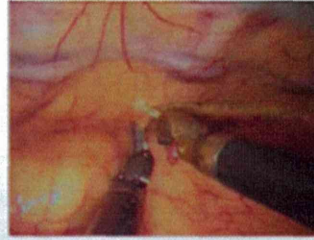
## 高齢者CABGの増加



The University of Tokyo

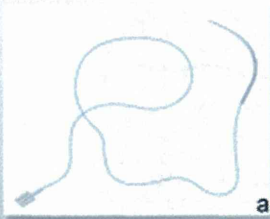


## MIDCAB, Robo-CAB

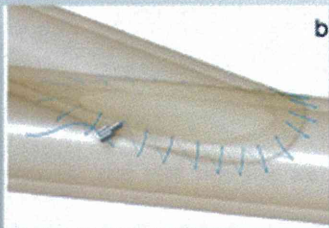


 The University of Tokyo

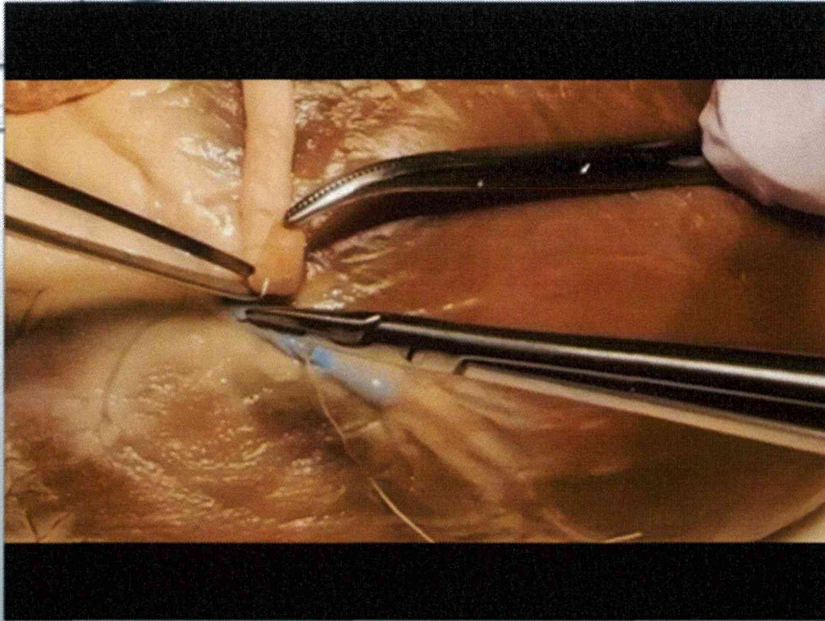
## New suturing device



- SUS316L stain-less steel
- YAG laser manufacturing
- 0.9 × 0.5 mm anchor shape mechanism
- fixing with a suture by pinching by needle holder after running suture
- omitting manual knot tying



 The University of Tokyo



 The University of Tokyo

## CABGの現状と近未来

- SYNTAX trialにおける5年の結果によって、中等度以上の3枝病変と左主幹部病変では、CABGの優位性が証明された。
- CABGへのMICS-CABG (MIDCAB, Robo-cab)の導入は限定的である。
- Hybrid治療 (LITA-LAD + stenting)の本邦への導入はしばらく進まないであろう。
- 新しい縫合デバイスの登場は、MICS-CABGの導入を促進することが期待される。

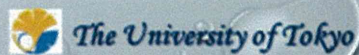
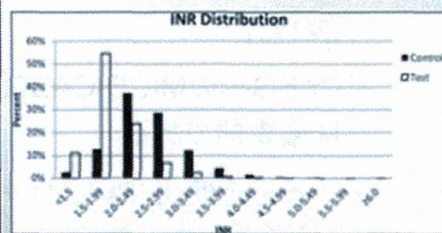
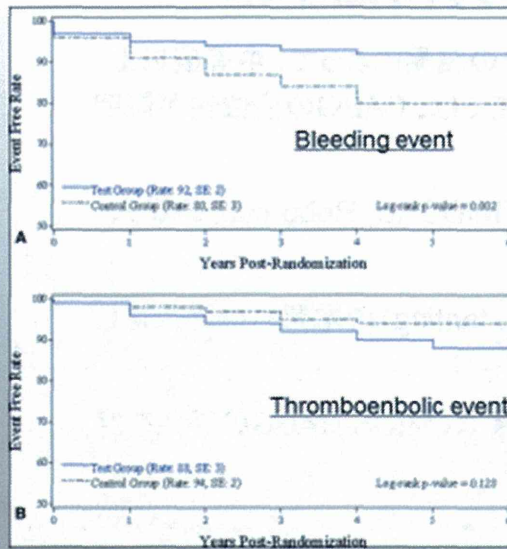
 The University of Tokyo

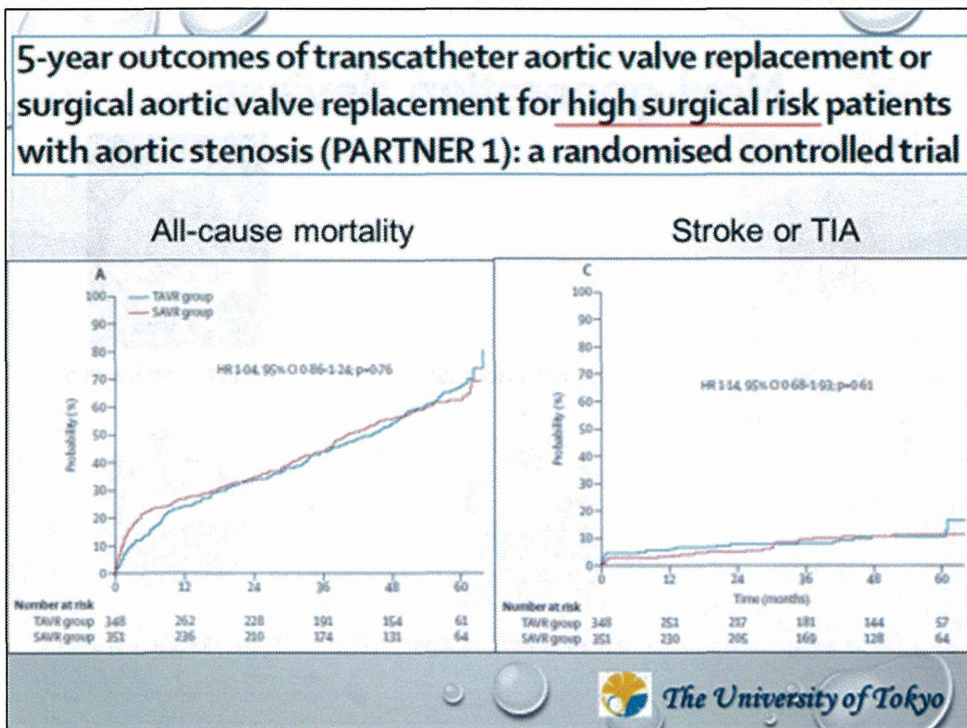
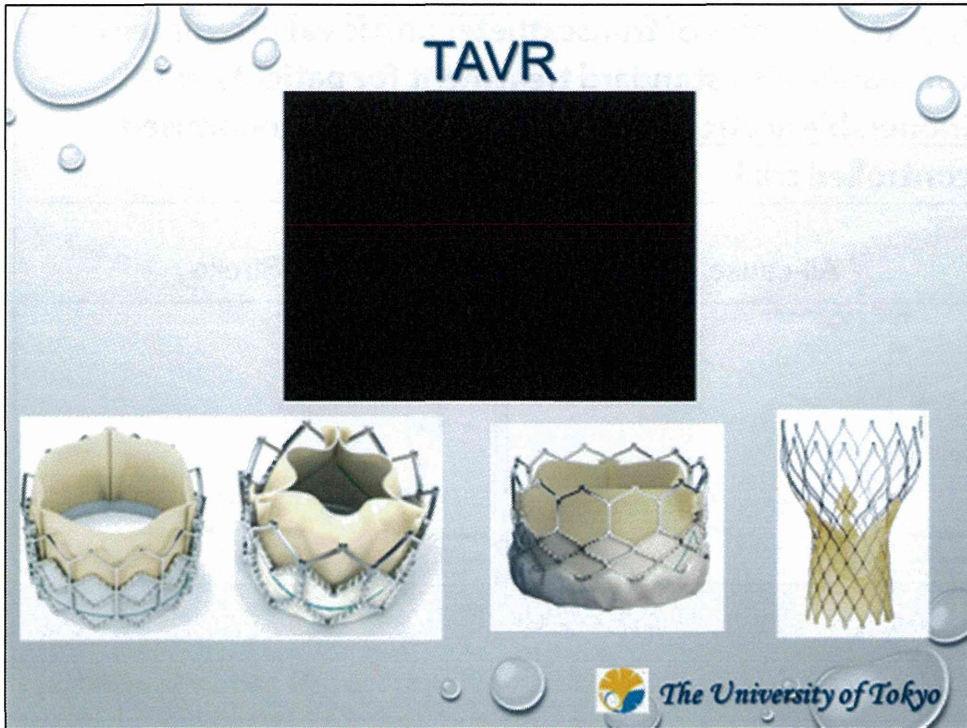


# 心臓弁膜症



## PROACT trial results in elevated TE risk patients (On-X valve) JTCVS 2014

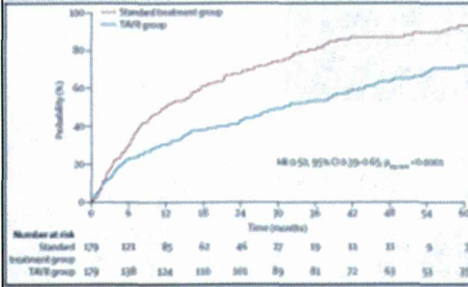




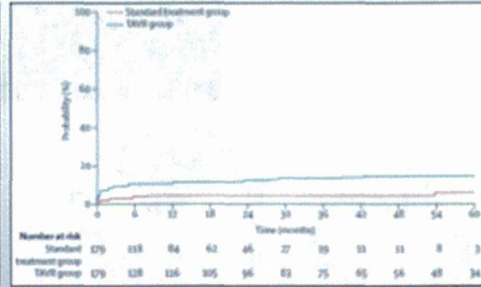


## 5-year outcomes of transcatheter aortic valve replacement compared with standard treatment for patients with inoperable aortic stenosis (PARTNER 1): a randomised controlled trial

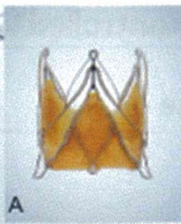
All-cause mortality



Stroke



## Next-generation devices



A  
JenaValve



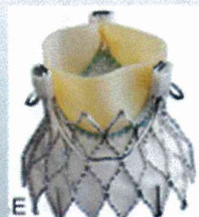
B  
Symetis Acurate



C  
Direct Flow Medical



D  
Portico



E  
Medtronic Engager



G  
Lotus Valve System

## Which bioprosthesis for aortic Valve in valve

### A. Stented

Perimount  
(Edwards Lifesciences)



Epic  
(St. Jude Medical)



Hancock II  
(Medtronic)



### B. Stented, Supraannular position

Magna  
(Edwards Lifesciences)



Mosaic  
(Medtronic)



### C. Stented, Externally Mounted Leaflets

Mitroflow  
(Sorin)



Trifecta  
(St. Jude Medical)



### D. Stentless

Freedom  
(Sorin)



Toronto SPV  
(St. Jude Medical)



Freestyle  
(Medtronic)



## Possible risk factor for coronary obstruction

### Anatomic Factors

- Low lying coronary ostia
- Narrow sinotubular junction / low sinus height
- Narrow sinuses of Valsalva
- Prior root repair (eg. root graft, coronary reimplantation)

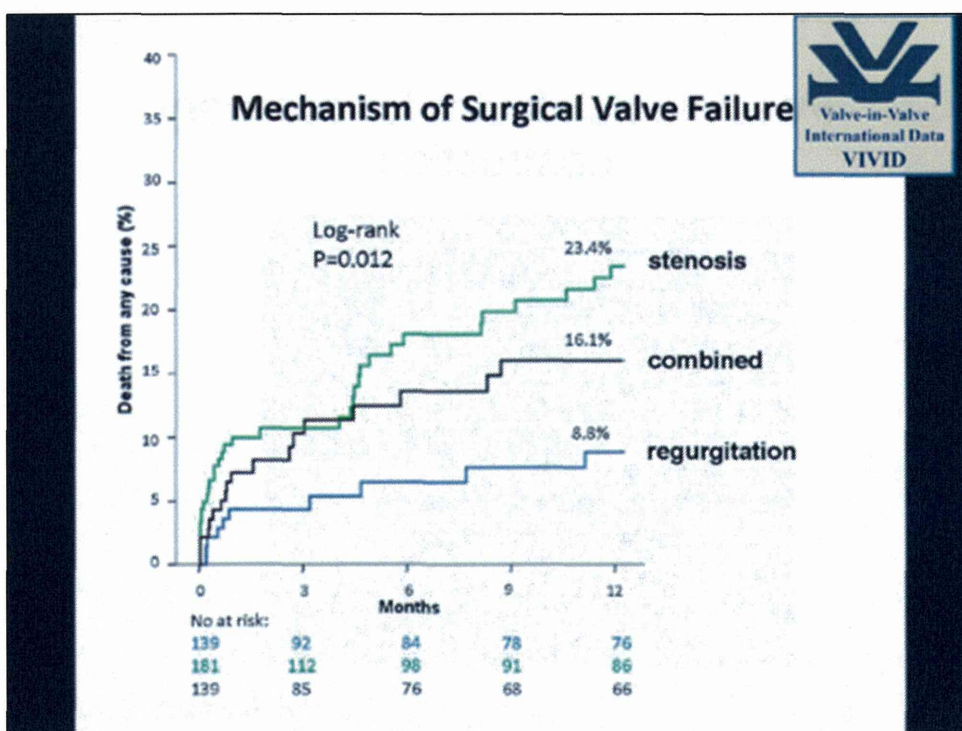
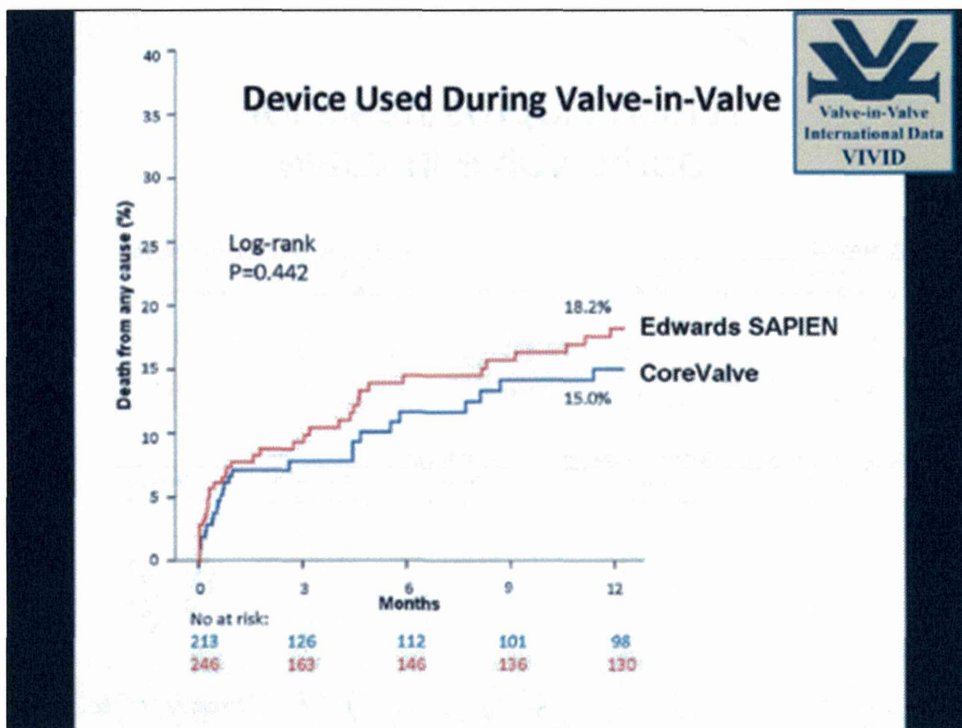
### Bioprosthetic valve factors

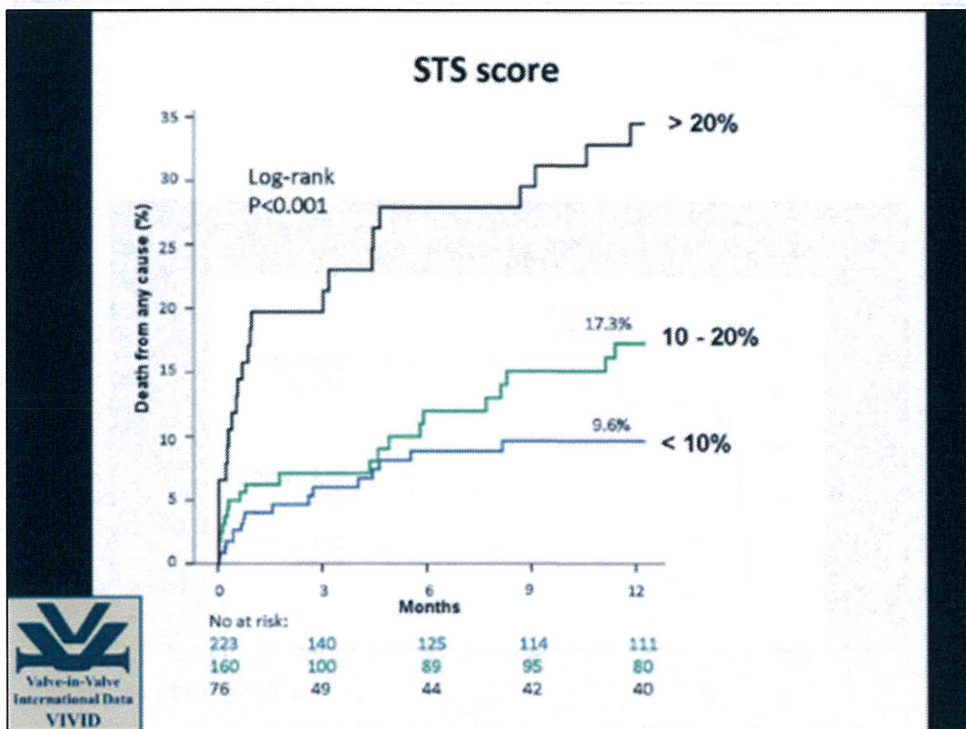
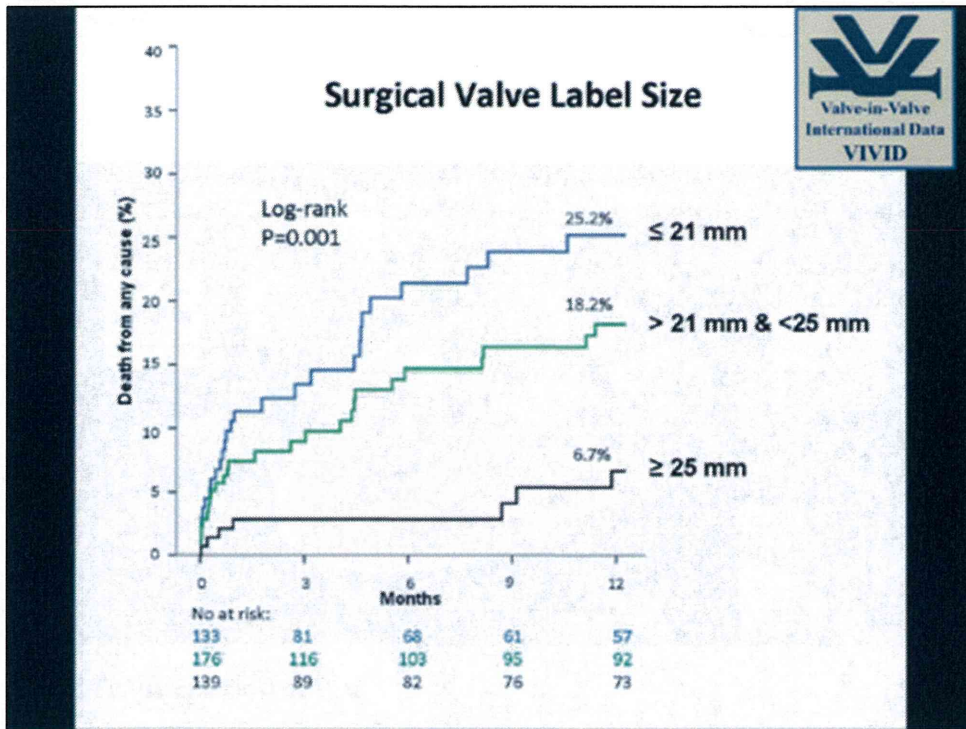
- Supra-annular position
- High leaflet profile
- Internal stent frame (eg. MitroFlow, Trifecta)
- No stent frame (homograft, stentless valves)
- Bulky leaflets

### Transcatheter valve factors

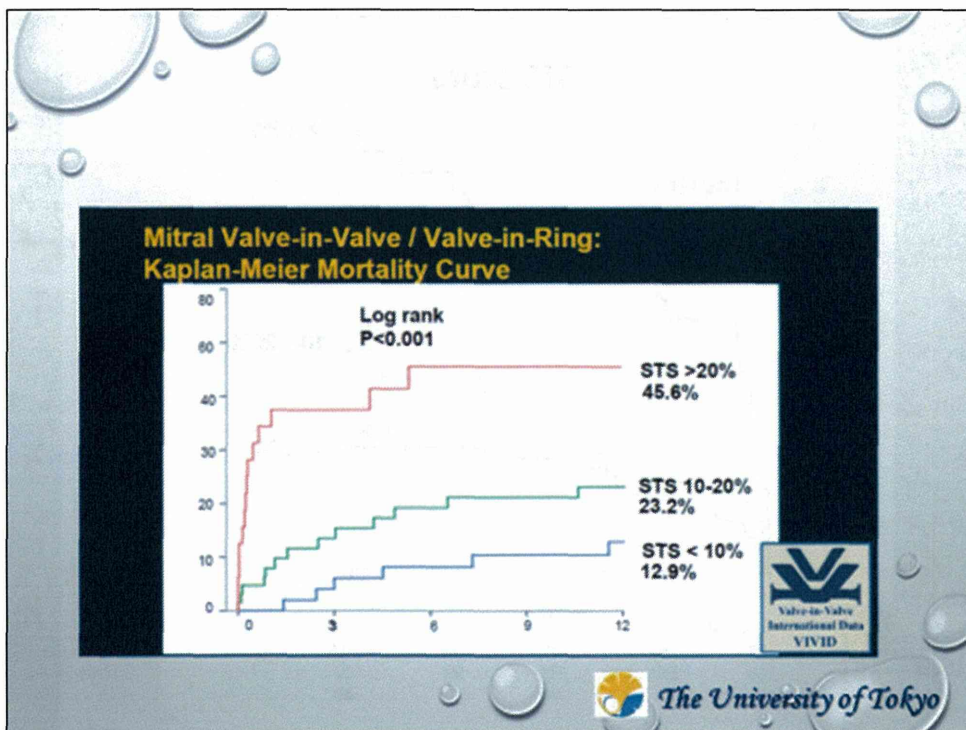
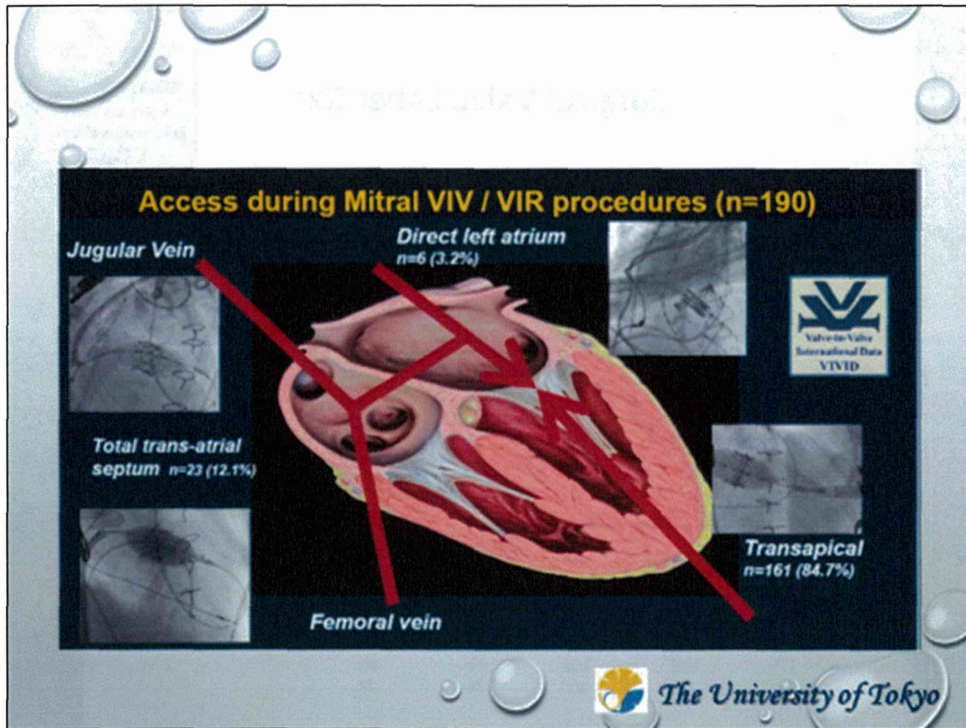
- Extended sealing cuff
- High implantation











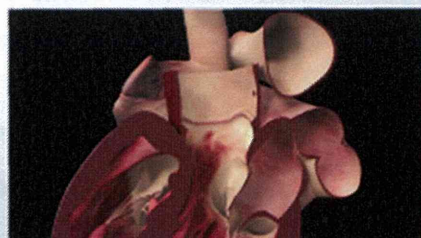
## Sutureless aortic valve



Perceval

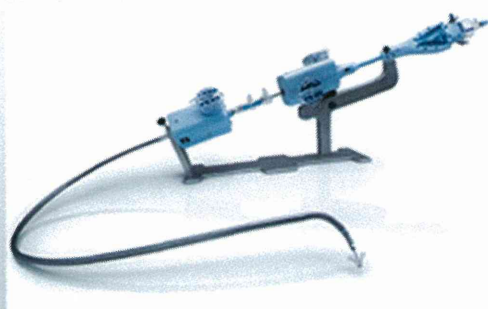


3f Enable



Intuity

## MitraClip



本邦においても、2015年より臨床試験が開始される(2-arm trial).

1. 正常心機能群:LVEF  $\geq$  30%のFMRおよびDMR
2. 低心機能群:LVEF  $<$  30%のFMRおよびDMR



## 弁膜症治療の現状と近未来

- 機械弁・生体弁の機能は向上し続け、低用量抗凝固療法が可能な機械弁、15年以上の耐久性を有する生体弁が登場するであろう。
- 中等度リスク群までTAVRの適応は拡大されるであろう。TAVRの10年成績は今後の弁置換の方向性を決めるであろう。
- カテーテル弁治療の普及は心臓外科トレーニング方法の修正を迫ることは間違いない。

#### IV. 研究成果の刊行に関する一覧表



## 研究成果の刊行に関する一覧表

該当刊行物なし

