

Catheter Closure of ASD in Elder Patients



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Common Morbidities in adult ASD

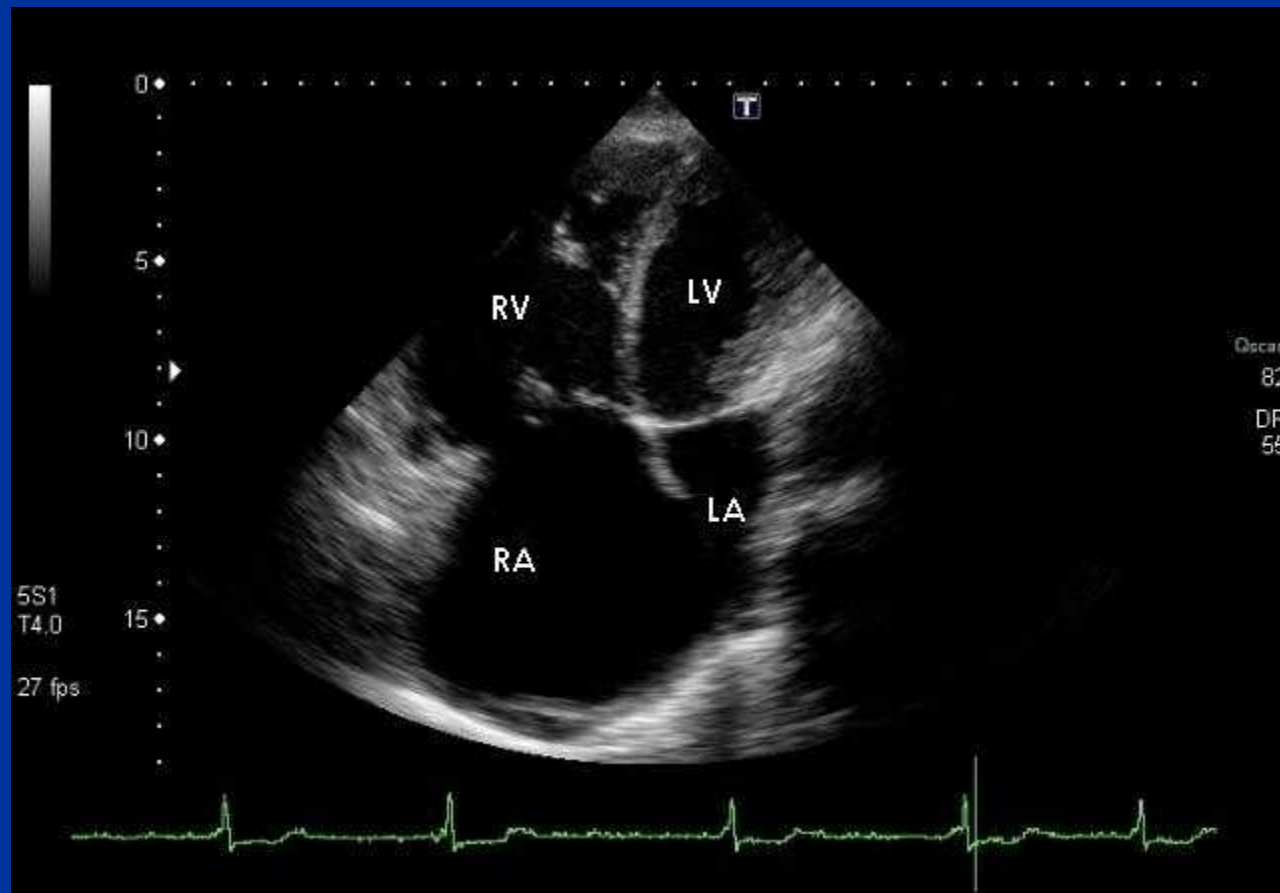
- Atrial arrhythmias
 - Paroxysmal, or Permanent.
- Valve regurgitation
 - Tricuspid, or Mitral
- Respiratory Dysfunction (COPD)
- Others
 - Hypertension, IHD, CKD

Case# . 82 years old, female.

History:

ASD was diagnosed at the time of admission of recurrent congestive heart failure.





FR 35Hz
15cm

2D
65%
C 50
P Off
Gen



M4

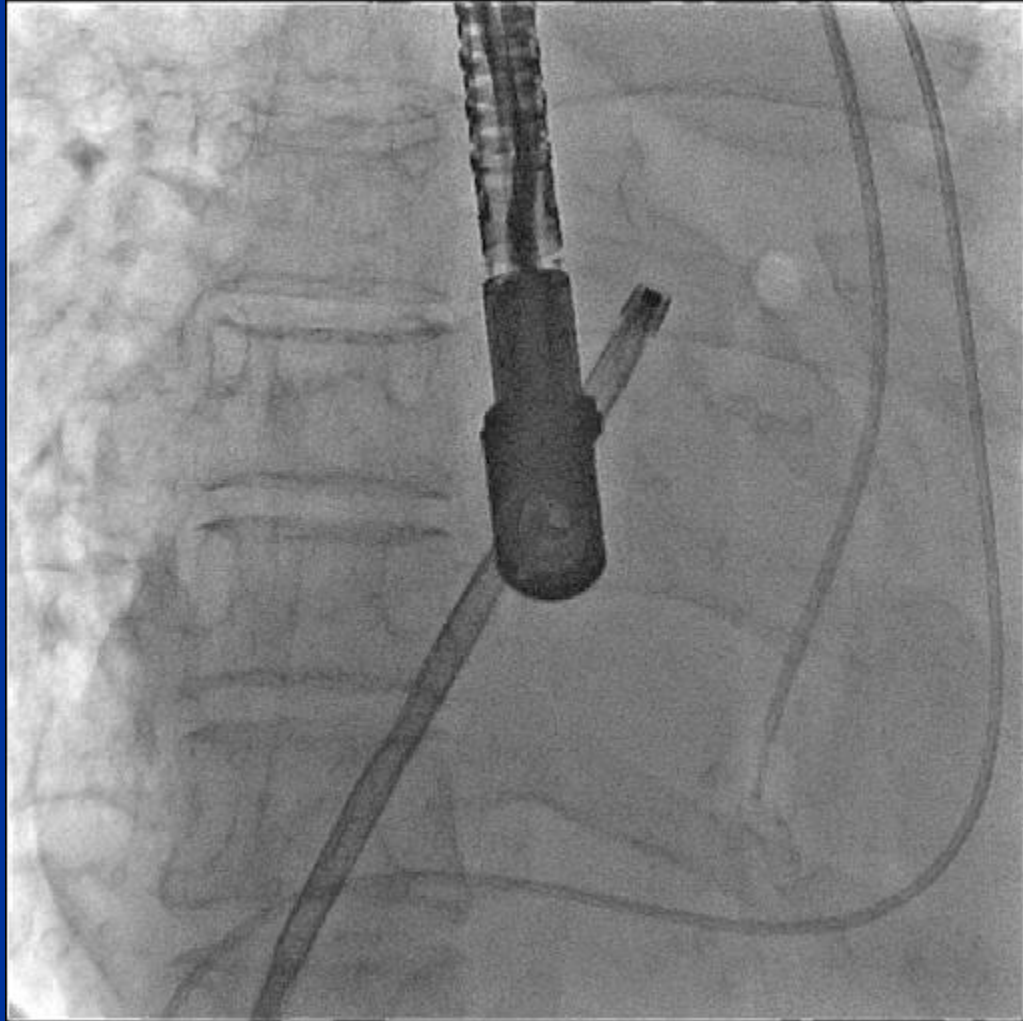


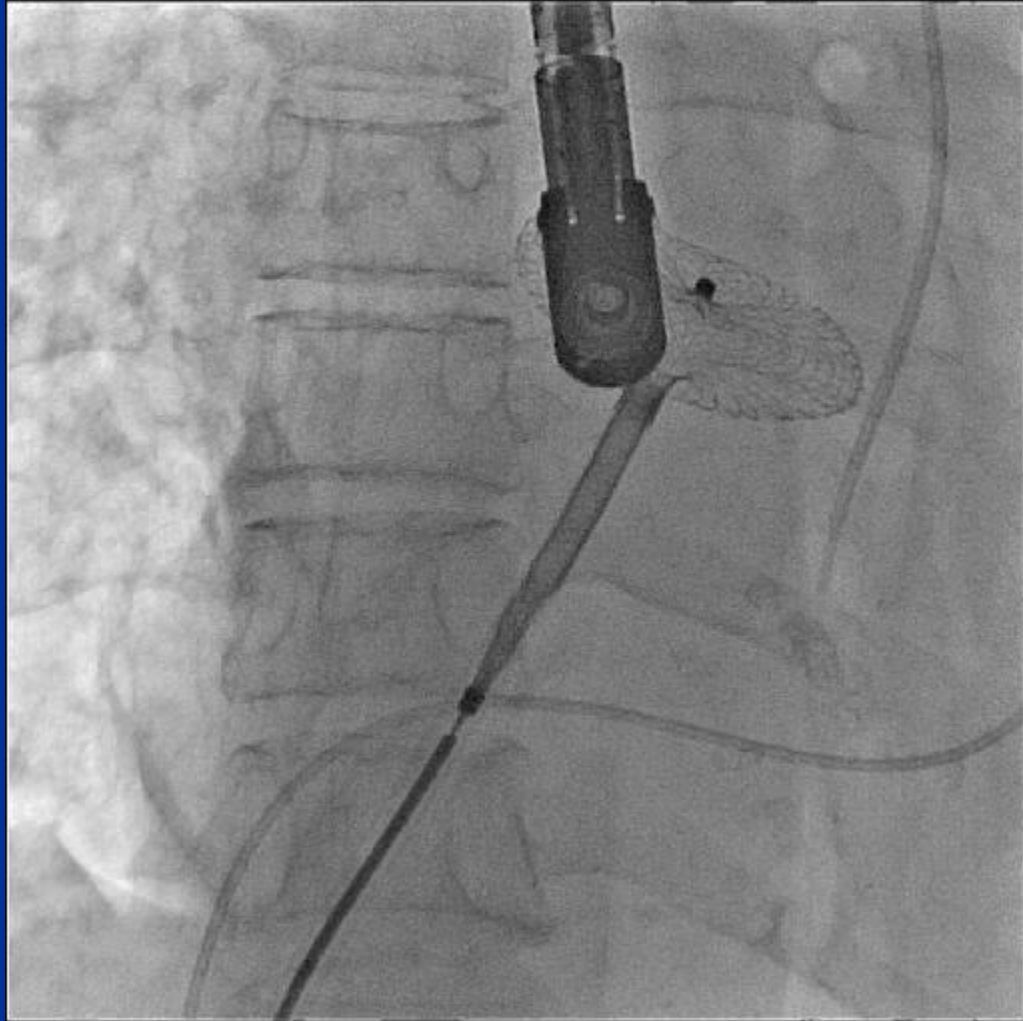
PAT T: 37.0C
TEE T: 37.8C

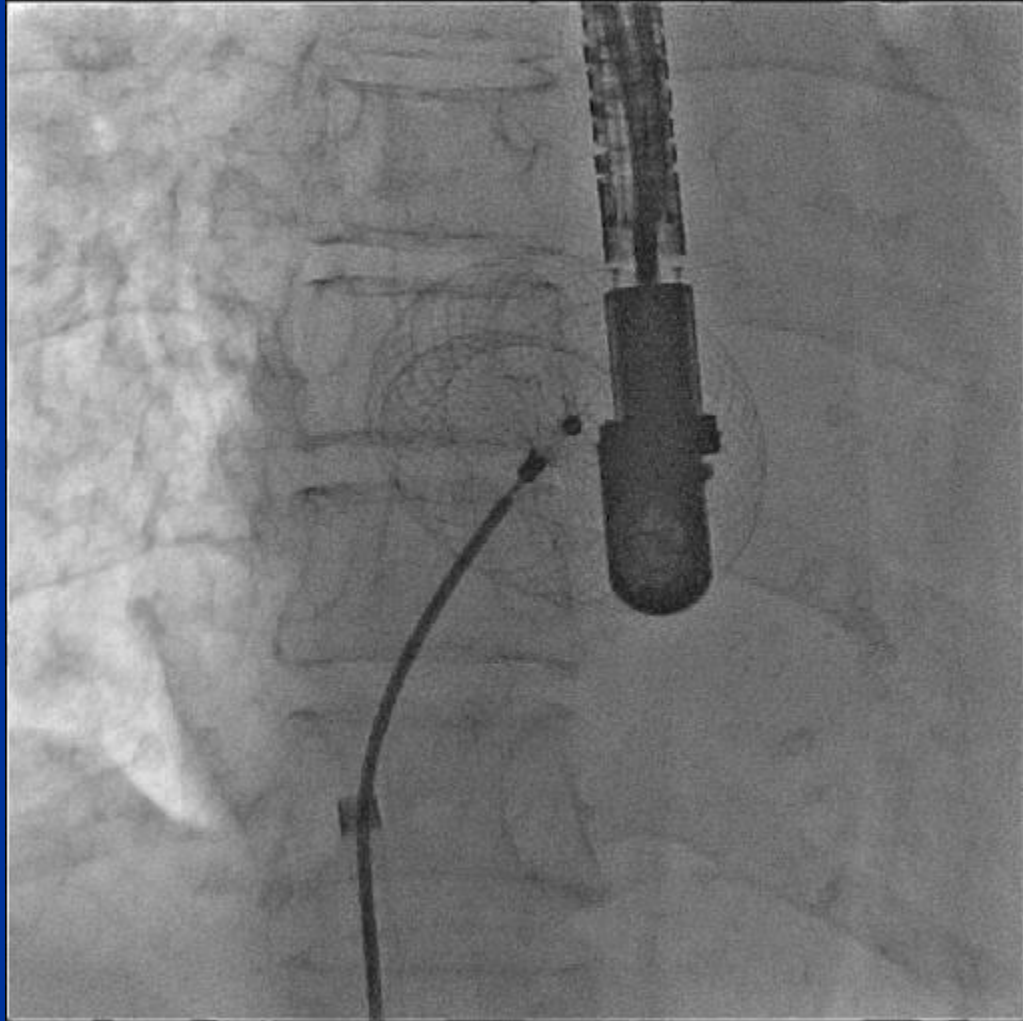


PHILIPS

1 cm









Before



3 months after

ASD in Geriatric Population

Totally different clinical features compared to pediatric population

- **Hemodynamic features**

heart failure, pulmonary hypertension
atrial arrhythmias, valve regurgitation, etc.

- **Co-morbidities**

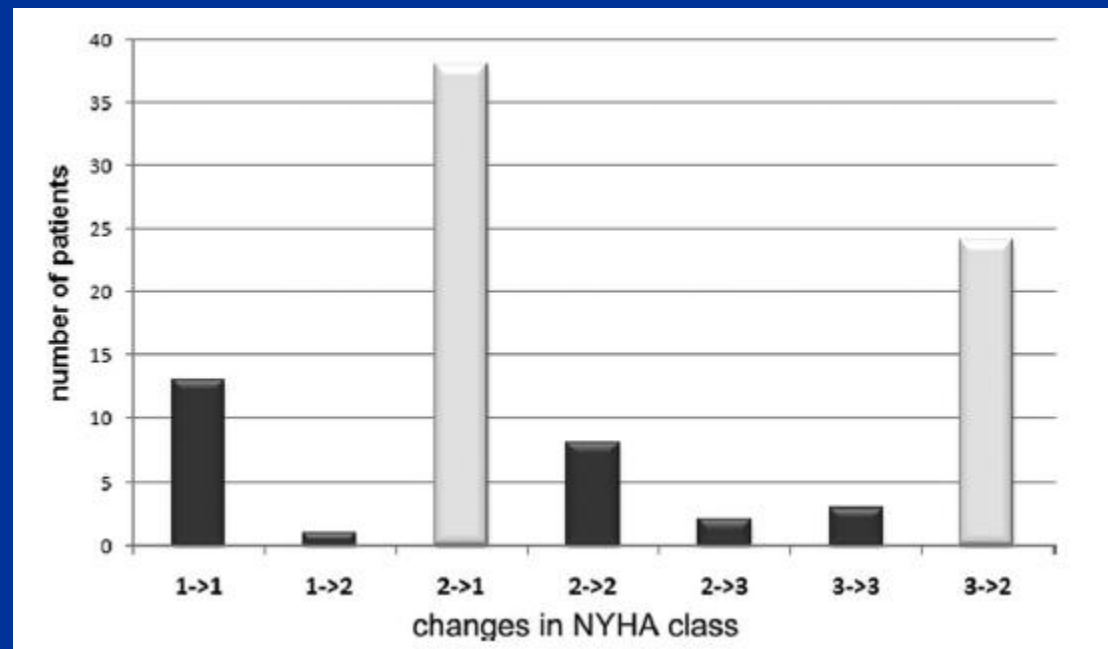
hypertension, stroke, coronary artery disease,
CKD, COPD, LV restrictive pathology, etc.

Percutaneous Closure of Atrial Septal Defects

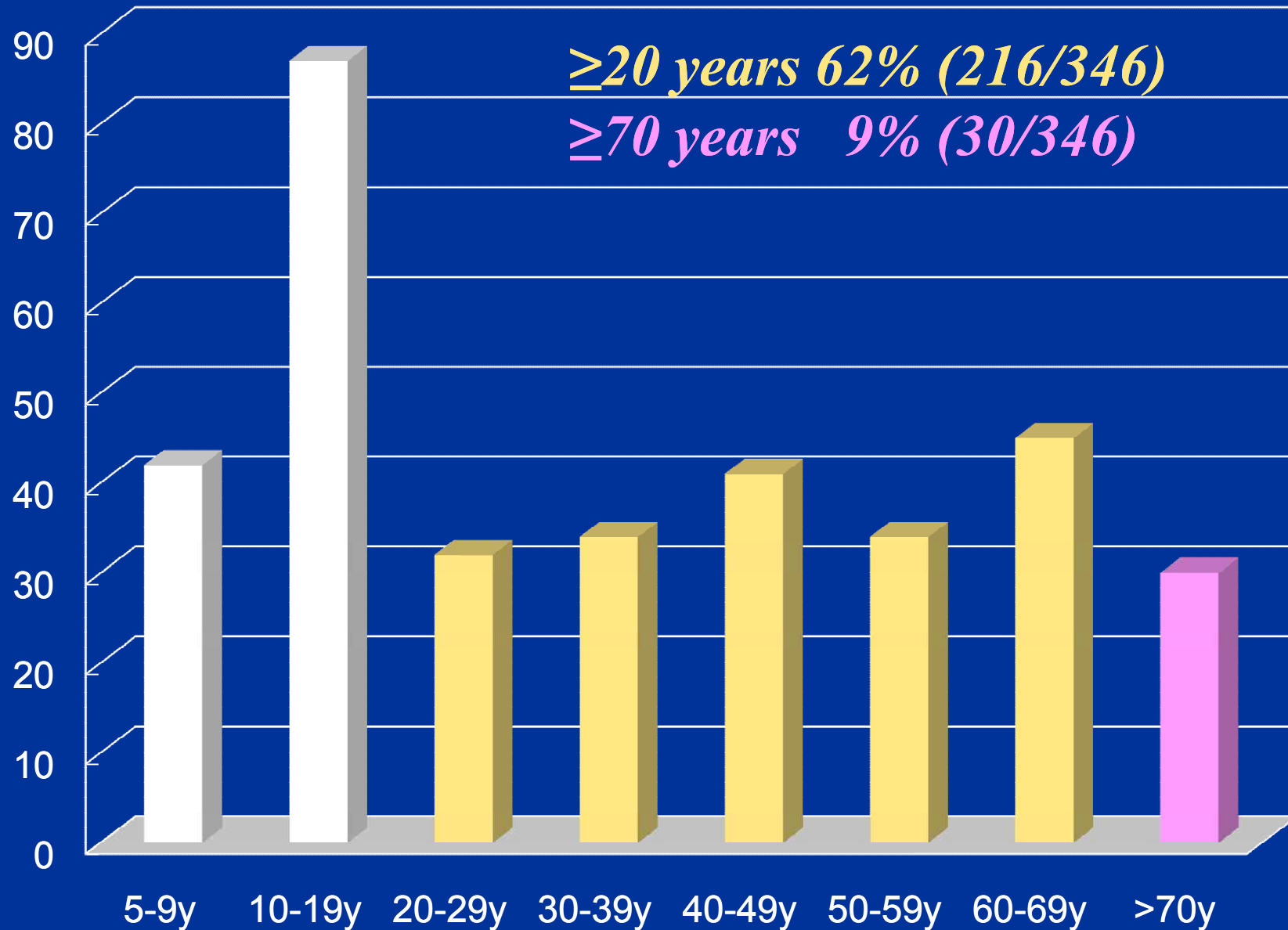
Echocardiographic and Functional Results in Patients Older Than 60 Years

Smita Jategaonkar, MD; Werner Scholtz, MD; Henning Schmidt, MD;
Dieter Horstkotte, MD, PhD, FESC

	Patient Group (n=96)
Age, years	69.9±5.3
Gender, female/male	66/30
Weight, kg	73.7±14.5
Height, cm	166.5±9.3
Shunt volume, % of Q _p	48.7±12.6
Balloon sizing diameter, mm	20.8±5.8
Native diameter, mm	14.8±5.8
Fluoroscopy time, minutes	8.4±5.1



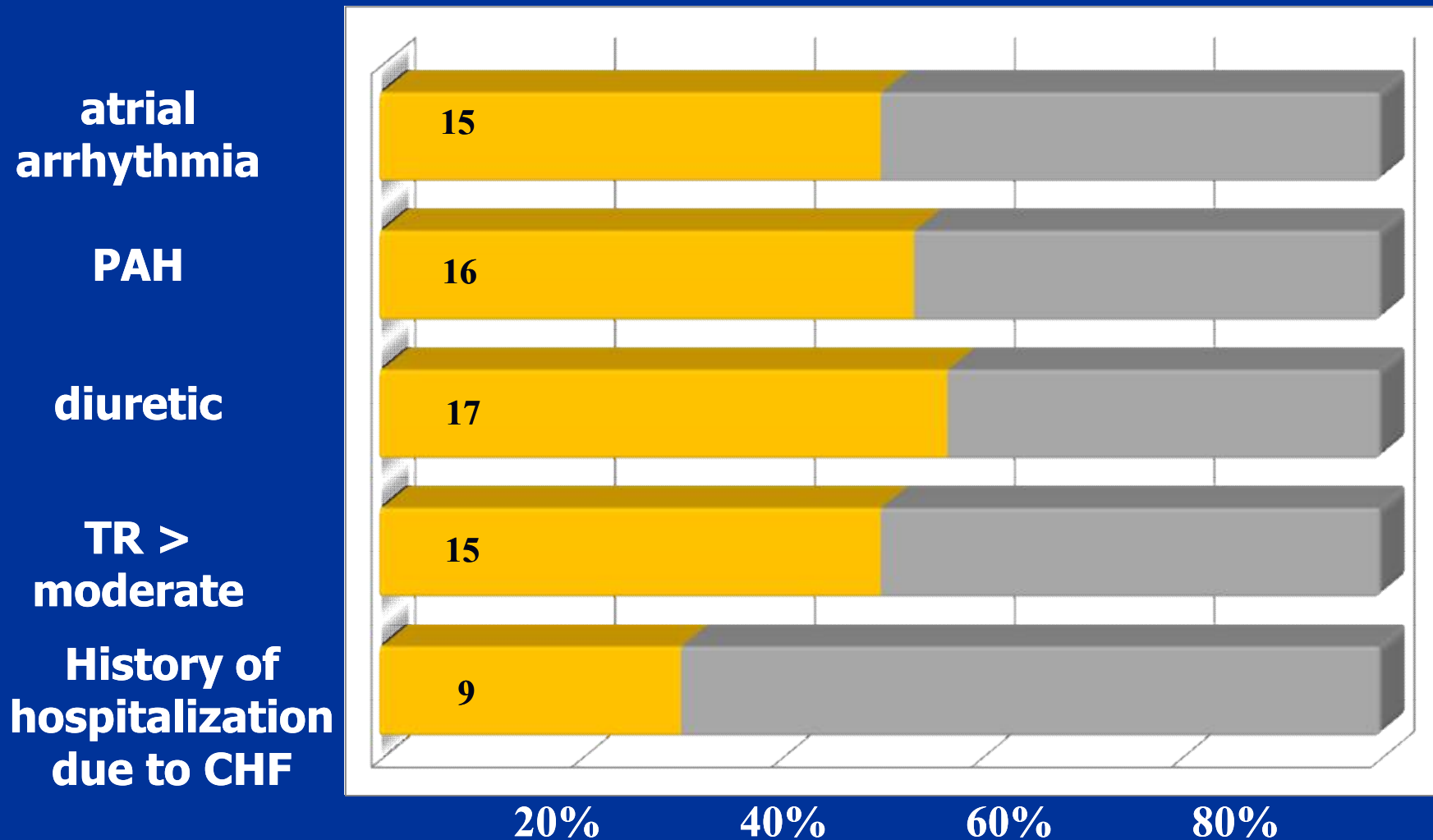
Age distribution (n=346)



Patient's Profile (n=30)

Gender (M/F)	10/ 20
Age at procedure (years)	75 \pm4 (70-85)
Defect size (mm)	20.3 \pm 6.4
Qp/Qs	2.4 \pm 0.7
Systolic PAP at cath (mmHg)	36 \pm 11
NYHA functional class (I / II / III)	4 / 16 / 10

Comorbidities & Medication



Comorbidities

Hypertension

12

Stroke

4

COPD

5

CKD
(eGFR<60)

11

CAD

2

None

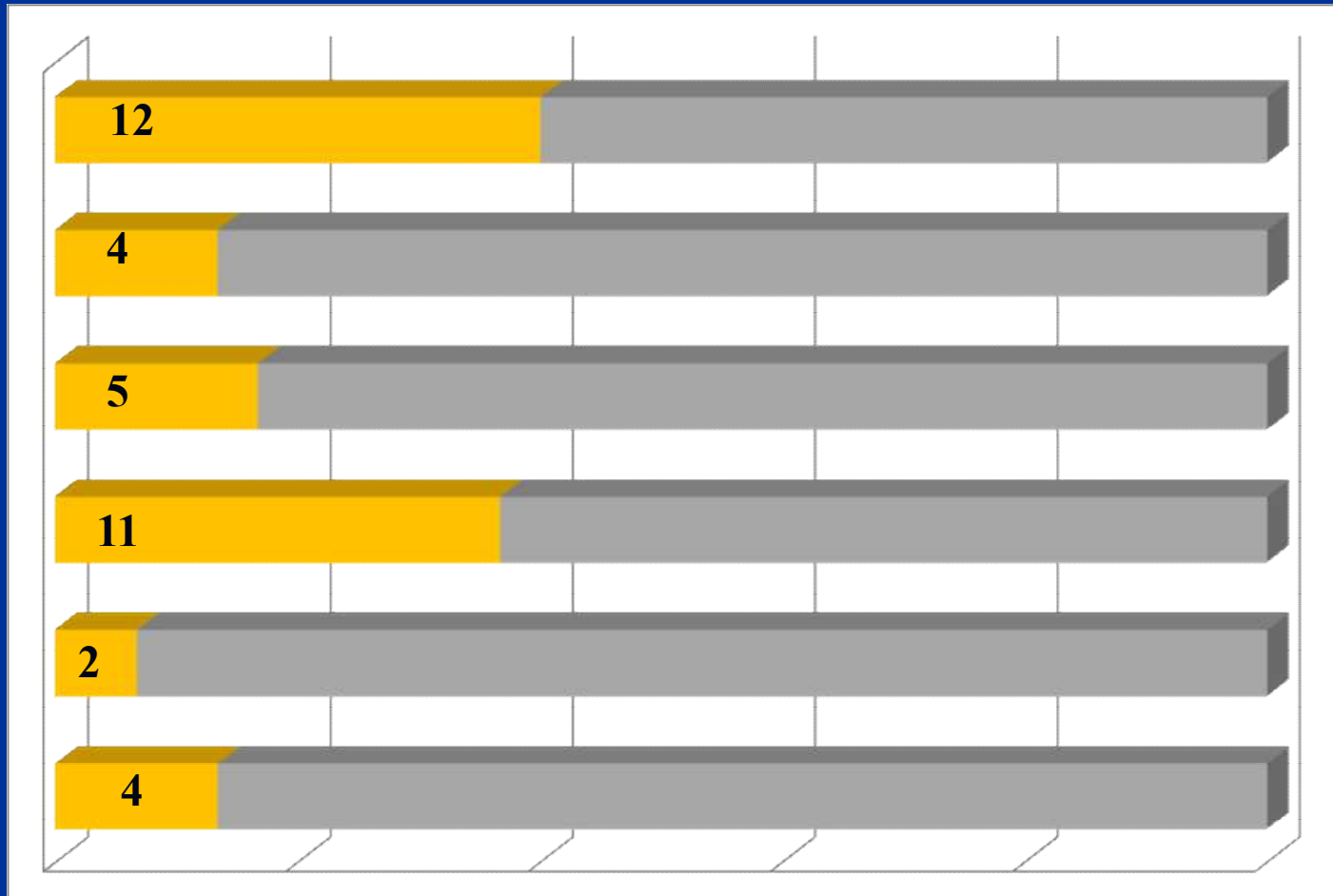
4

20%

40%

60%

80%



Procedural Outcome

Device deployment	93% (28/30)
Device size (mm)	24 ± 6
Residual shunt	25% (7/28)
Acute complication	0% (0/28)

Mid-term Results

Follow-up period (m) **16.0 ± 12.1 (3-45) months**

Event free survival **93% (26/28)**

2 patients died

(one due to prostate cancer, the other unknown sudden death)

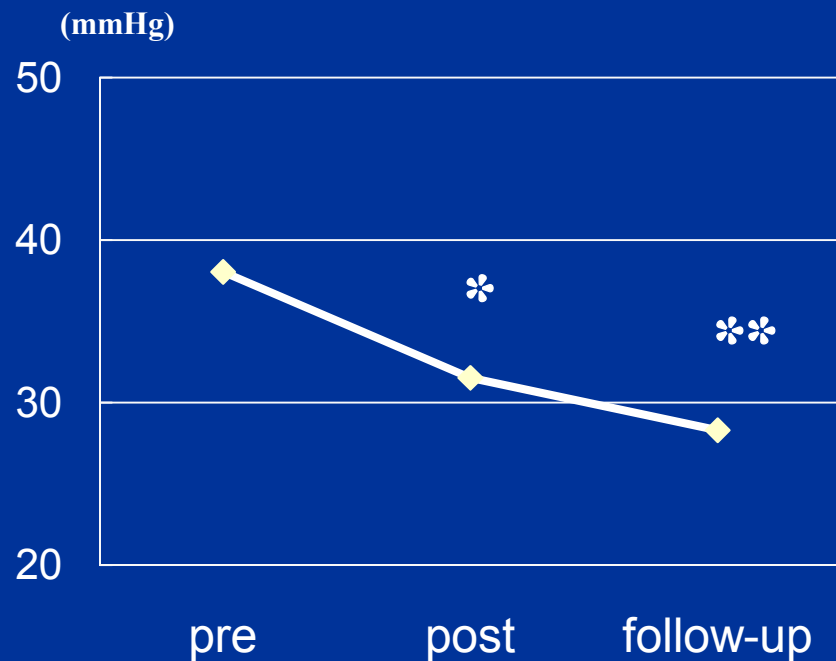
Residual shunt **8% (2/26)**

Late complication **4% (1/26)**

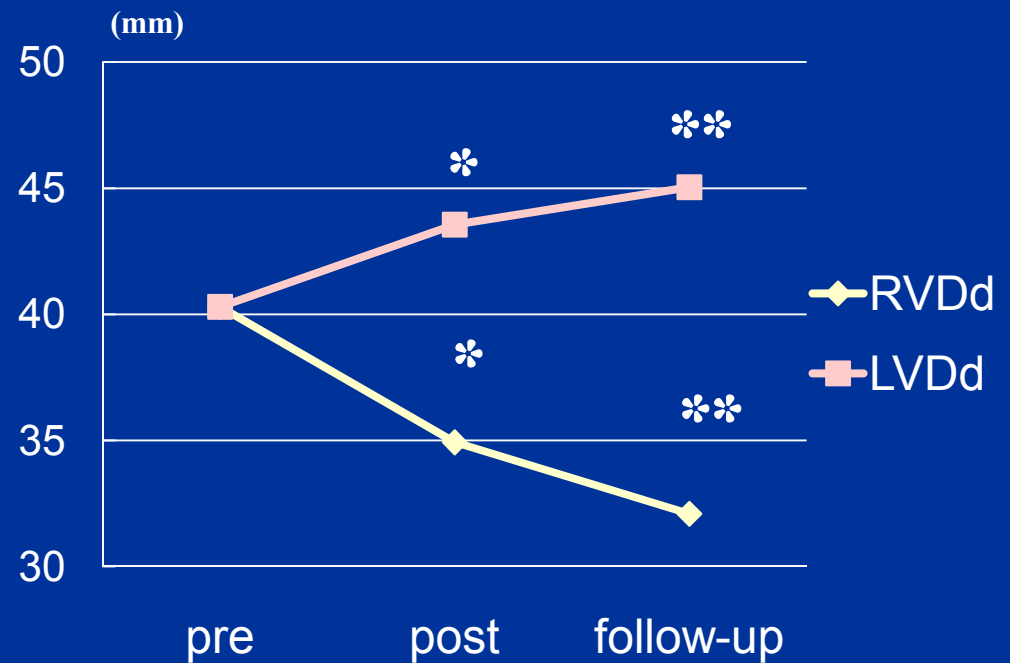
(1 patient who had paroxysmal AF developed permanent AF)

Change of Hemodynamic Parameters

RV systolic pressure

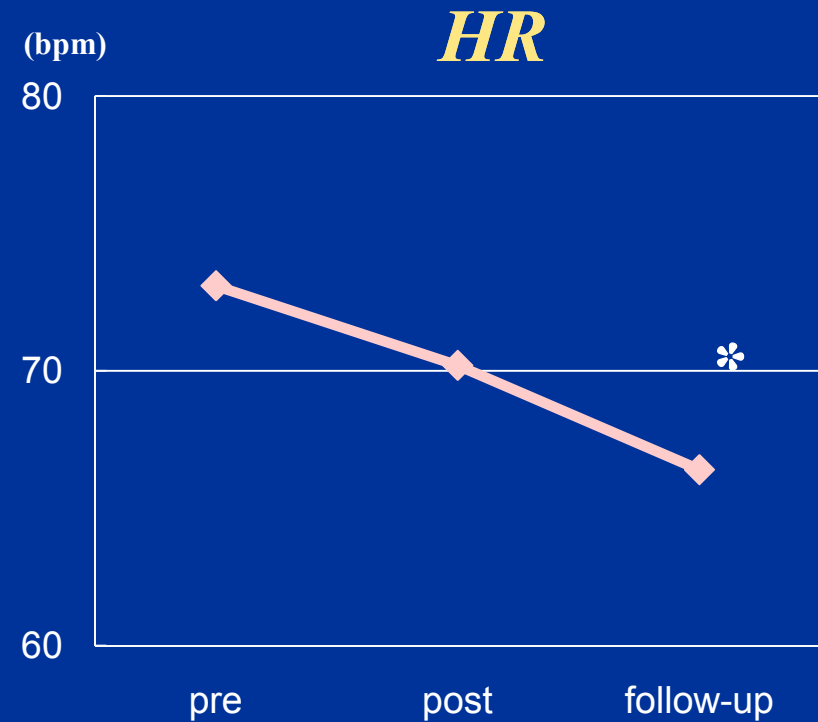
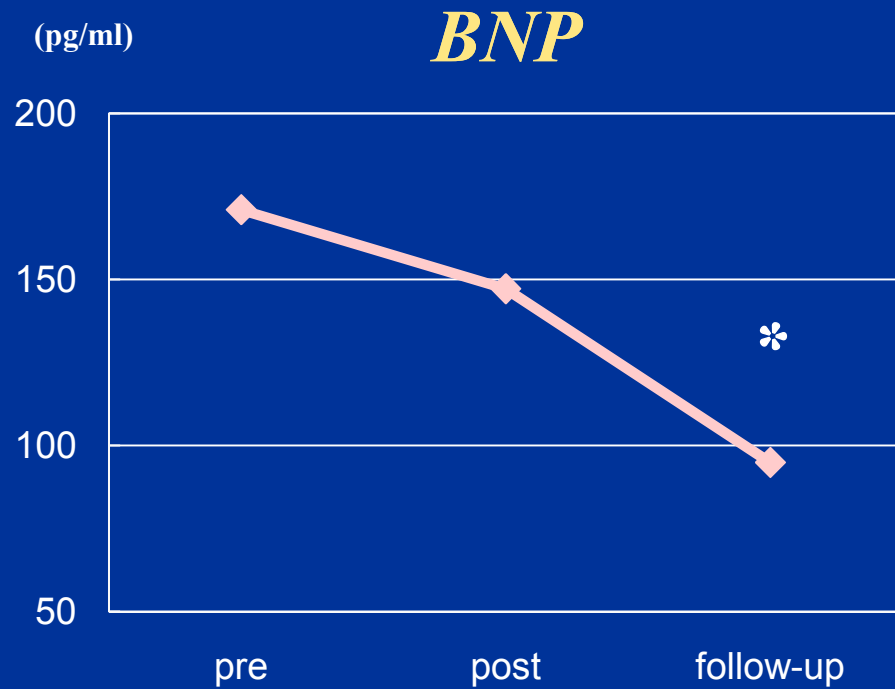


RV/LV diastolic dimension



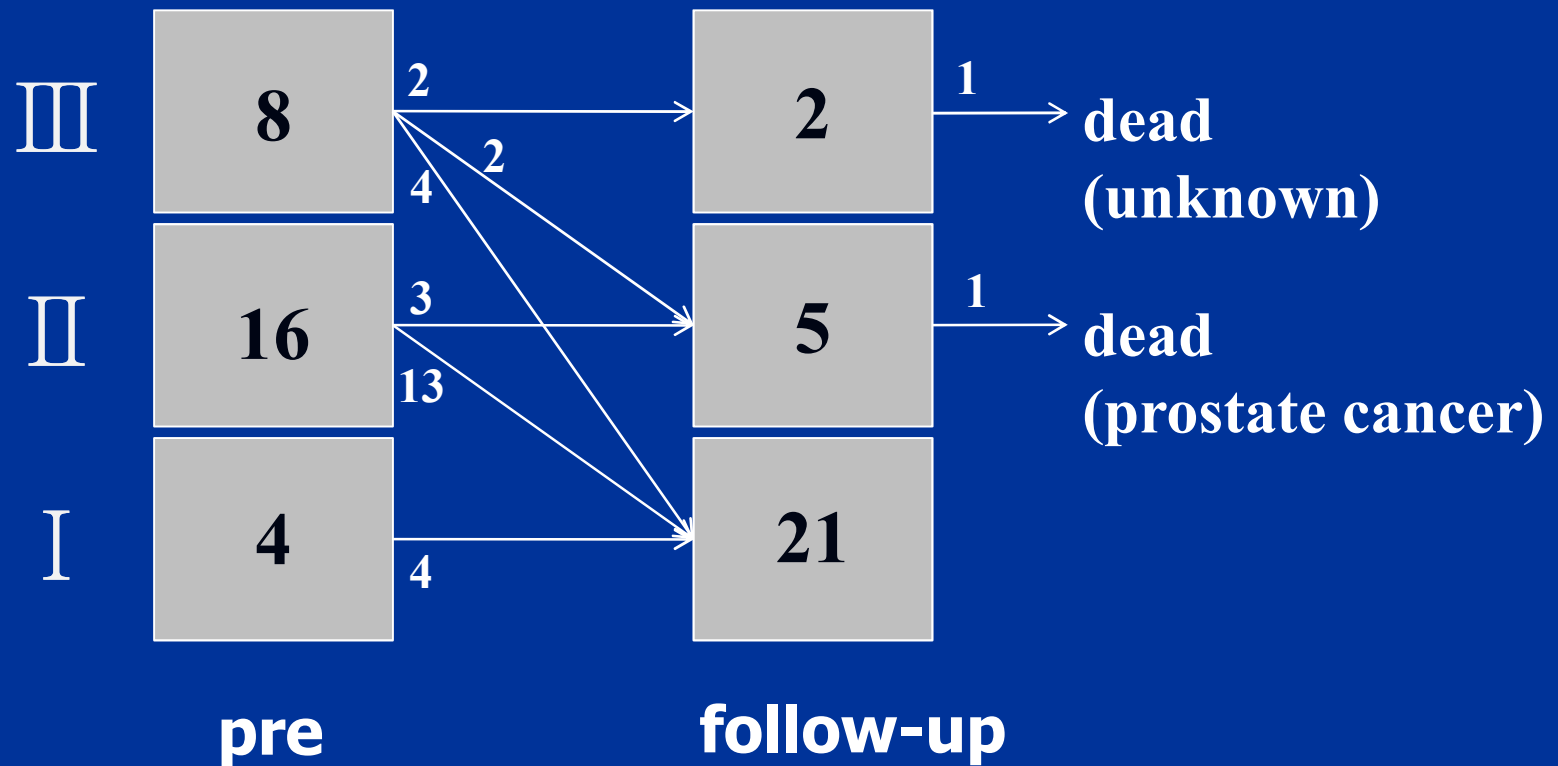
* ; P < 0.05 *** ; P < 0.01 *** ; P < 0.001

Change of Hemodynamic Parameters



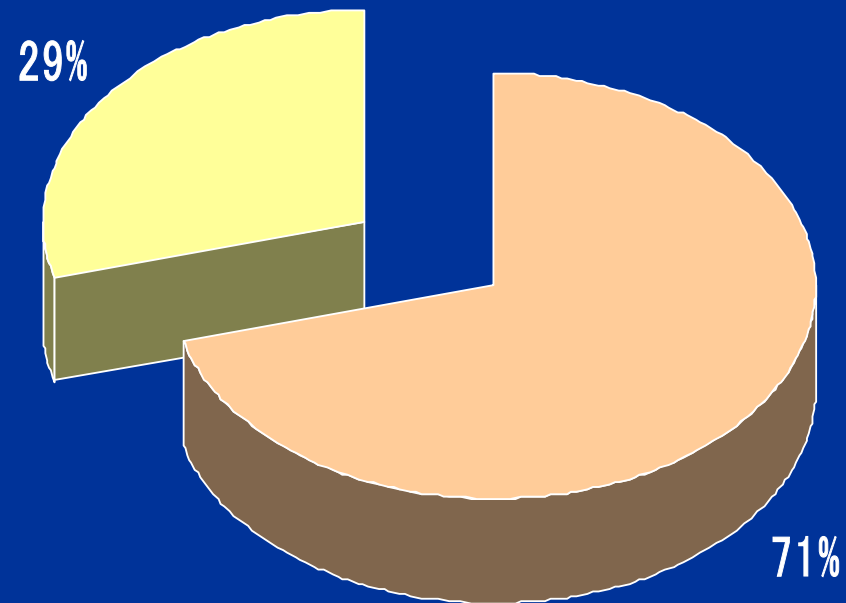
* ; $P < 0.05$

Change of NYHA Class

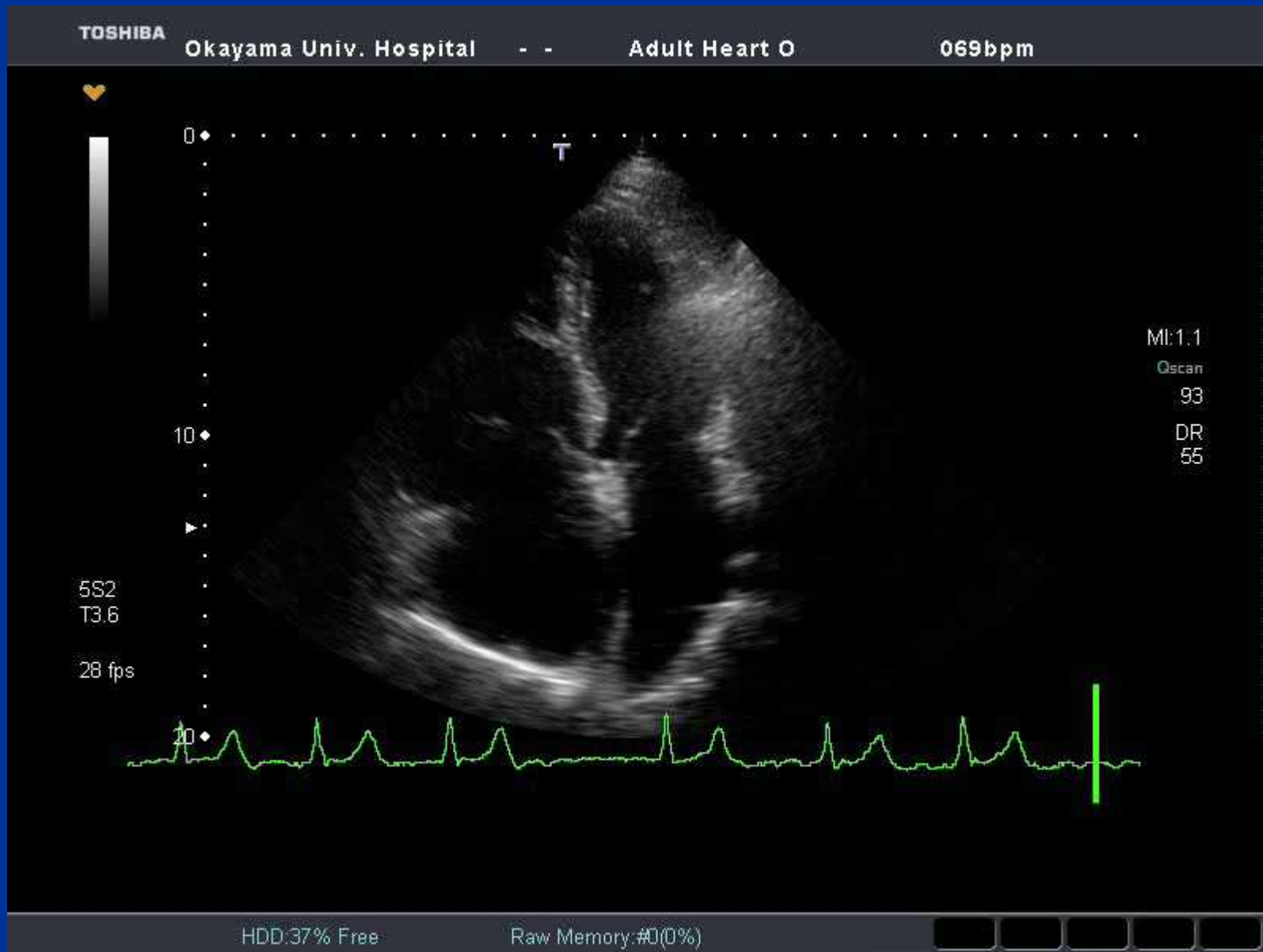


Improvement of NYHA class : 68%

Atrial fibrillation (≥ 60 years)



■ sinus ■ af



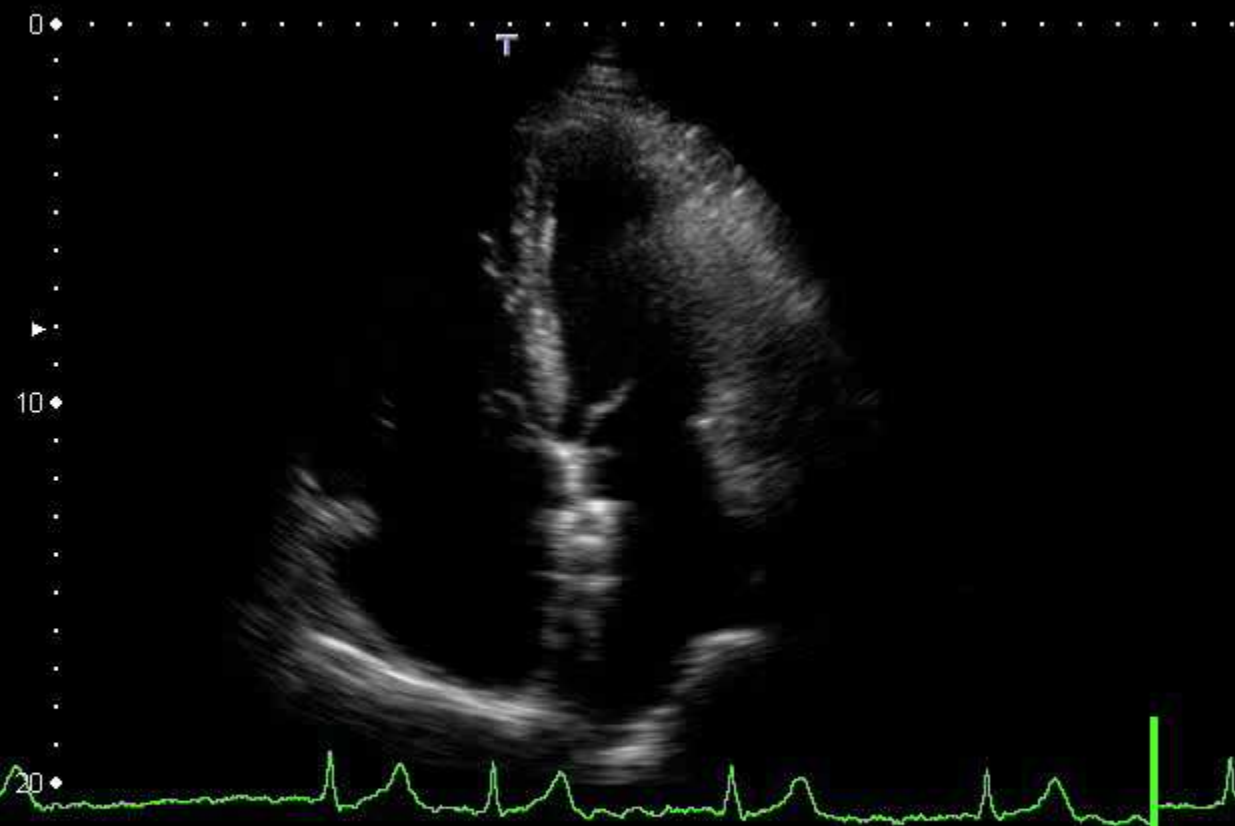
70 years female, ASD + permanent af

TOSHIBA

Okayama Univ. Hospital

Adult Heart 0

058bpm



MI:1.5
Qscan
84
DR
55

5S2
T3.6
28 fps

20

HDD:36% Free

Raw Memory:#0(0%)

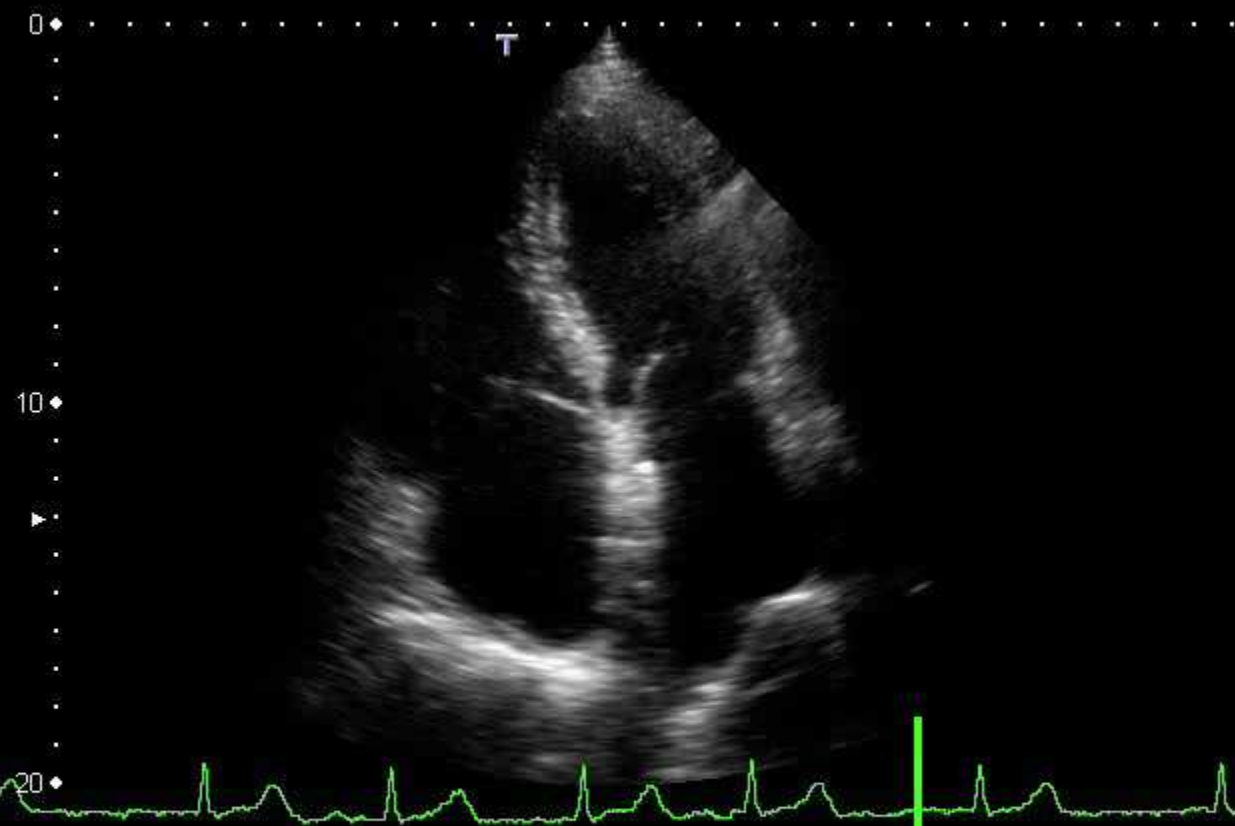


TOSHIBA

Okayama Univ. Hospital

Adult Heart 0

059bpm



MI:1.2
Qscan
91
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T4.0

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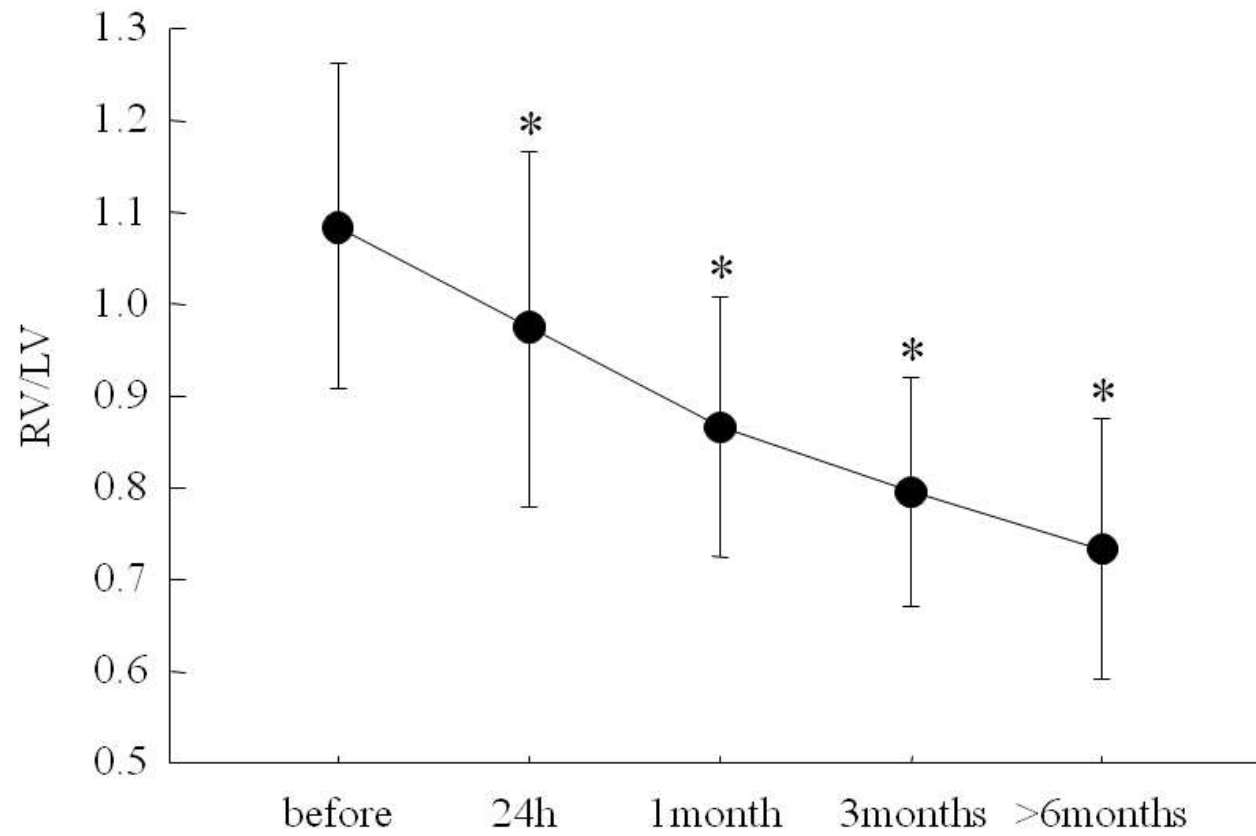
0
10
20

HDD:36% Free

Raw Memory:#0(0%)



FIGURE 2A



Issues of ASD closure in Geriatric Population

- Higher risk of procedure
- Natural course
- Hemodynamic intolerance
- Thromboembolic complications
- Management after the procedure

Conclusions

- **ASD in adults or geriatric population is not rare. Most of them hesitate surgical correction.**
 - **Catheter closure of ASD**
 - safe and effective even in patients >70years**
 - low complication rate**
 - improve NYHA class & cardiac parameters**
- ⇒ can be recommended even in geriatric population**