

Heart Team For TAVI

Who and How?

Heart Team Concept

- Existed for decades in heart transplant and ventricular assist device programs.
- More recently popularized for treatment of coronary artery disease
SYNTAX trial *N Engl J Med* 2009;360:961-972
- But most of the care even today remains fragmented.

- The Centers for Medicare & Medicaid Services embraced this concept, mandating that patients undergoing transcatheter aortic valve replacement (**TAVR**) be evaluated and cared for by a multidisciplinary heart team.

At the present time, for patients with coronary artery disease, the professional silos of cardiology and cardio-thoracic surgery often do not overlap, despite the fact that the underlying missions have great similarity.

Cardiology

Assessment: invasive and noninvasive imaging

Risk factor evaluation

Associated medical problems

Patient education

Selection of revascularization strategy

Referral to surgery

Follow-up care

Cardiothoracic surgery

Assessment of risk

Assessment of severity

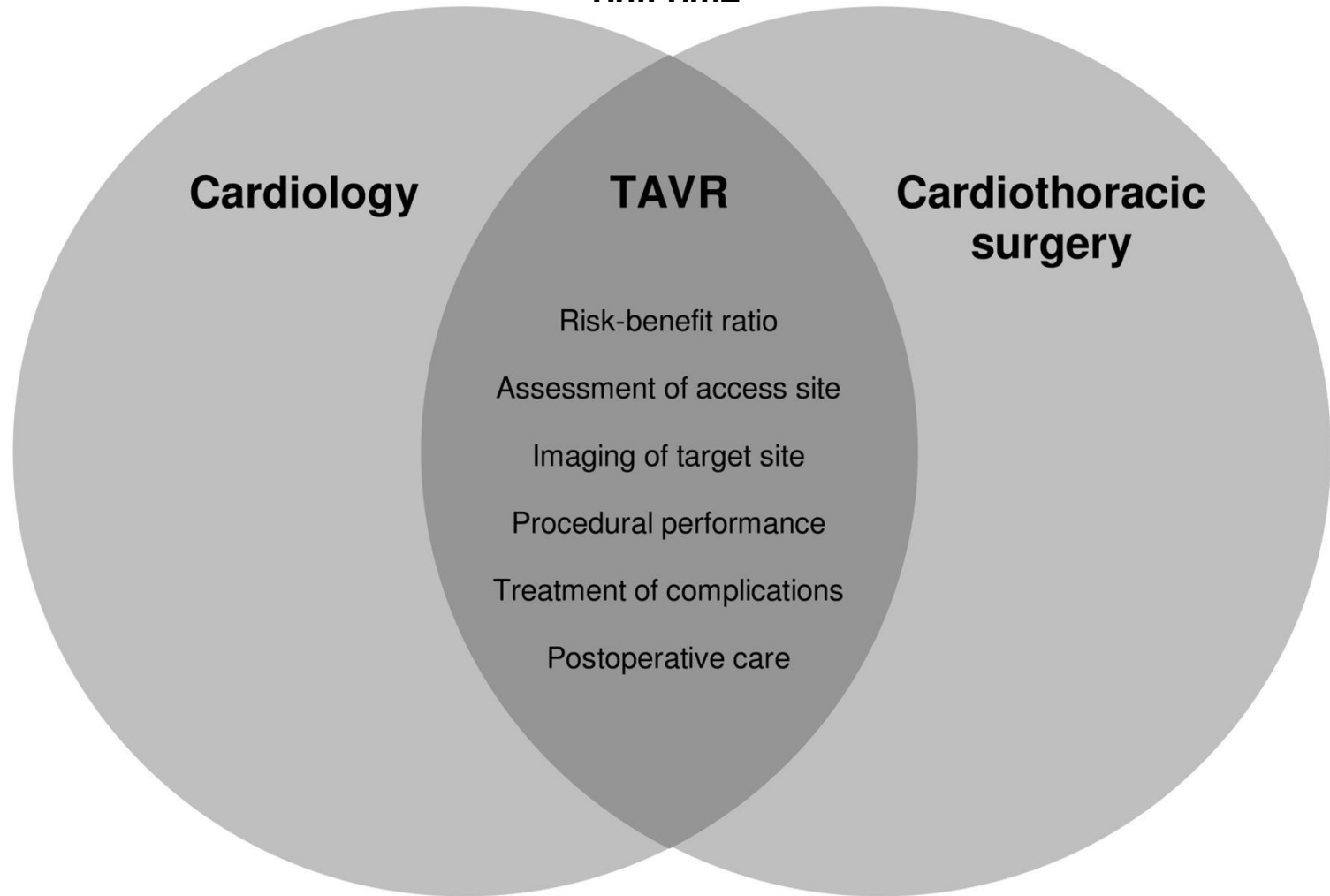
Procedural performance, if indicated

Immediate postoperative care

Treatment of complications

**David R. Holmes, Jr et al. Eur J Cardiothorac Surg
2013;43:255-257**

The development of a TAVR Heart Team and blending the disciplines of cardiology and cardio-thoracic surgery will enhance optimal patient selection, procedural performance and outcome



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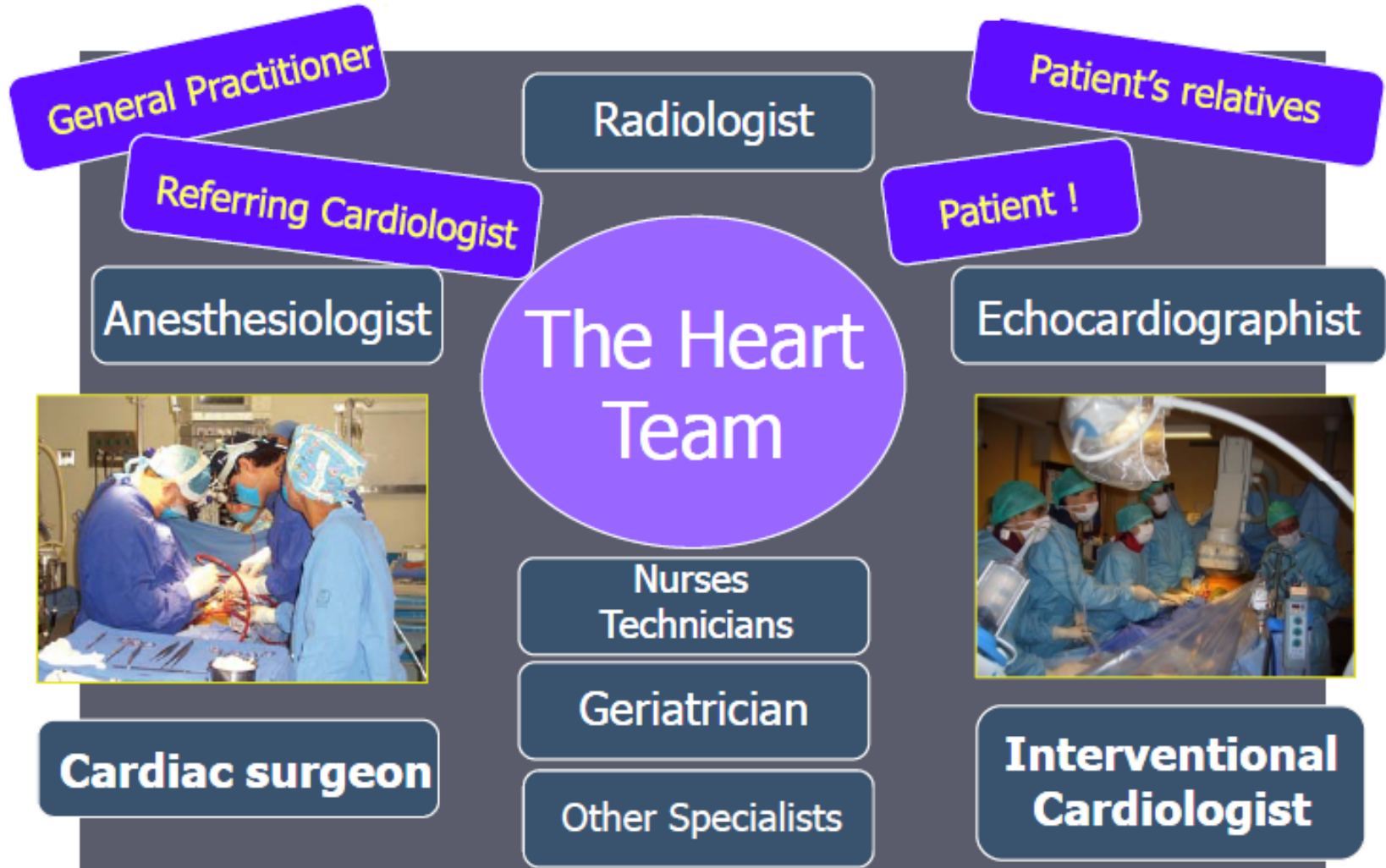
The beauty and strength of TAVI has been to reinforce the relationship between interventionalists and surgeons.

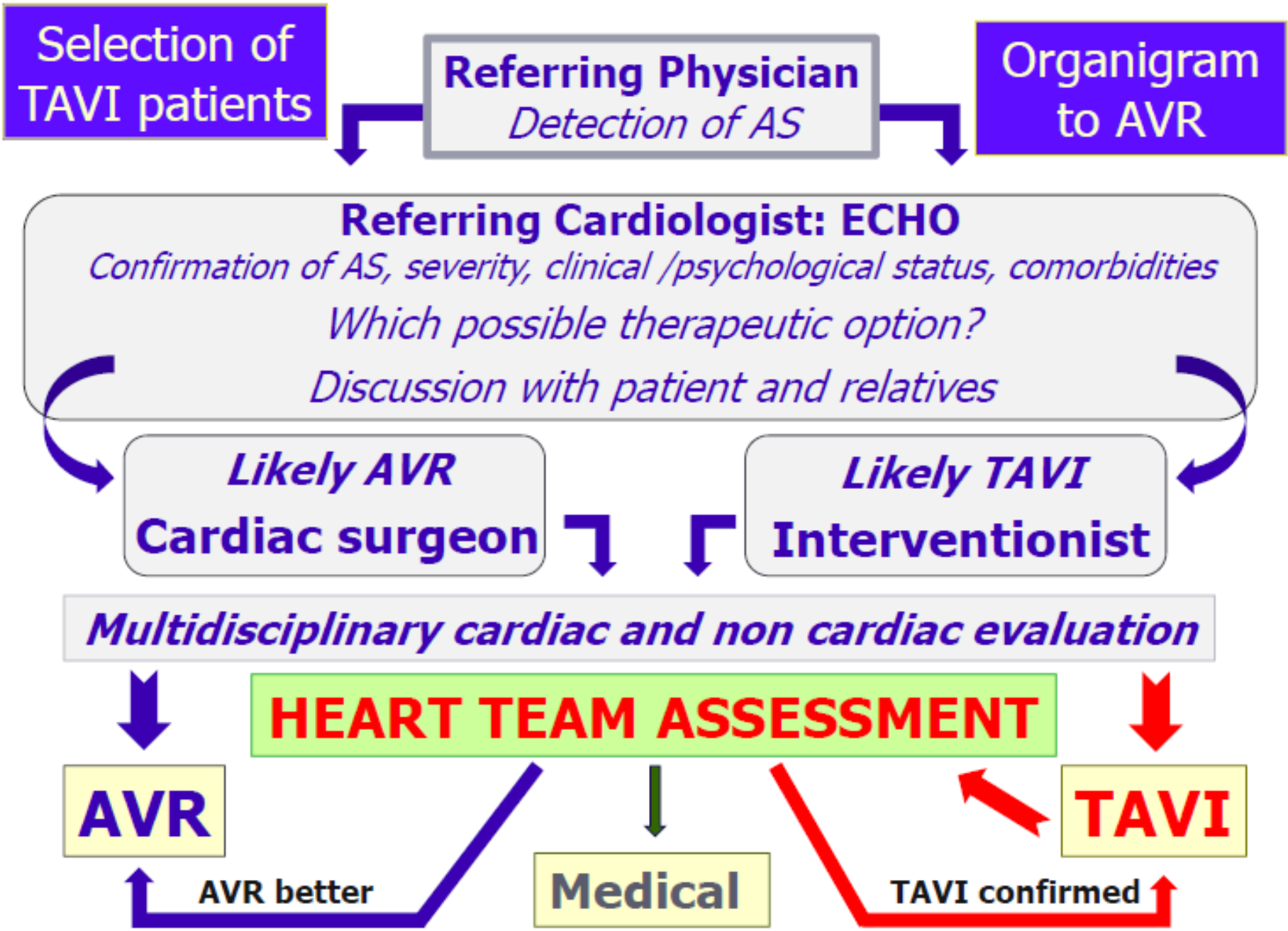
But it is not enough !

A dedicated *multidisciplinary team* (Heart Team) is crucial to ensure a successful program

A new era of partnership

for patient screening, completion of the procedure
and assessment of the results





Three questions that the HEART TEAM must answer:

1- Is TAVI an acceptable option for the patient?

Recommendations, Risk / Benefit

2- Is the anatomy suitable?

(Need to decrease the risk of complications)

3- What is the safest approach?

Transfemoral ? Transapical? Trans-aortic (Edwards)

Transfemoral ? Axillary ? (Corevalve)

Is TAVI an acceptable option

TAVI Clinical Indications

NEW EUROPEAN GUIDELINES (ESC 2012)

- Severe aortic stenosis in symptomatic patient
- Who is candidate
- 1) High surgical risk patients:
 - Log Euroscore > 20%, STS Score > 10%
- 2) Patients with contra-indication to surgery
Porcelain aorta, thorax distortion, irradiation, LIMA etc..
- 3) Patient frailty Consensus: Cardiologist / Surgeon / Anesthesiologist / Geriatrician

ASSESSMENT of FRAILTY (Geriatrician, Anesthesiologist)

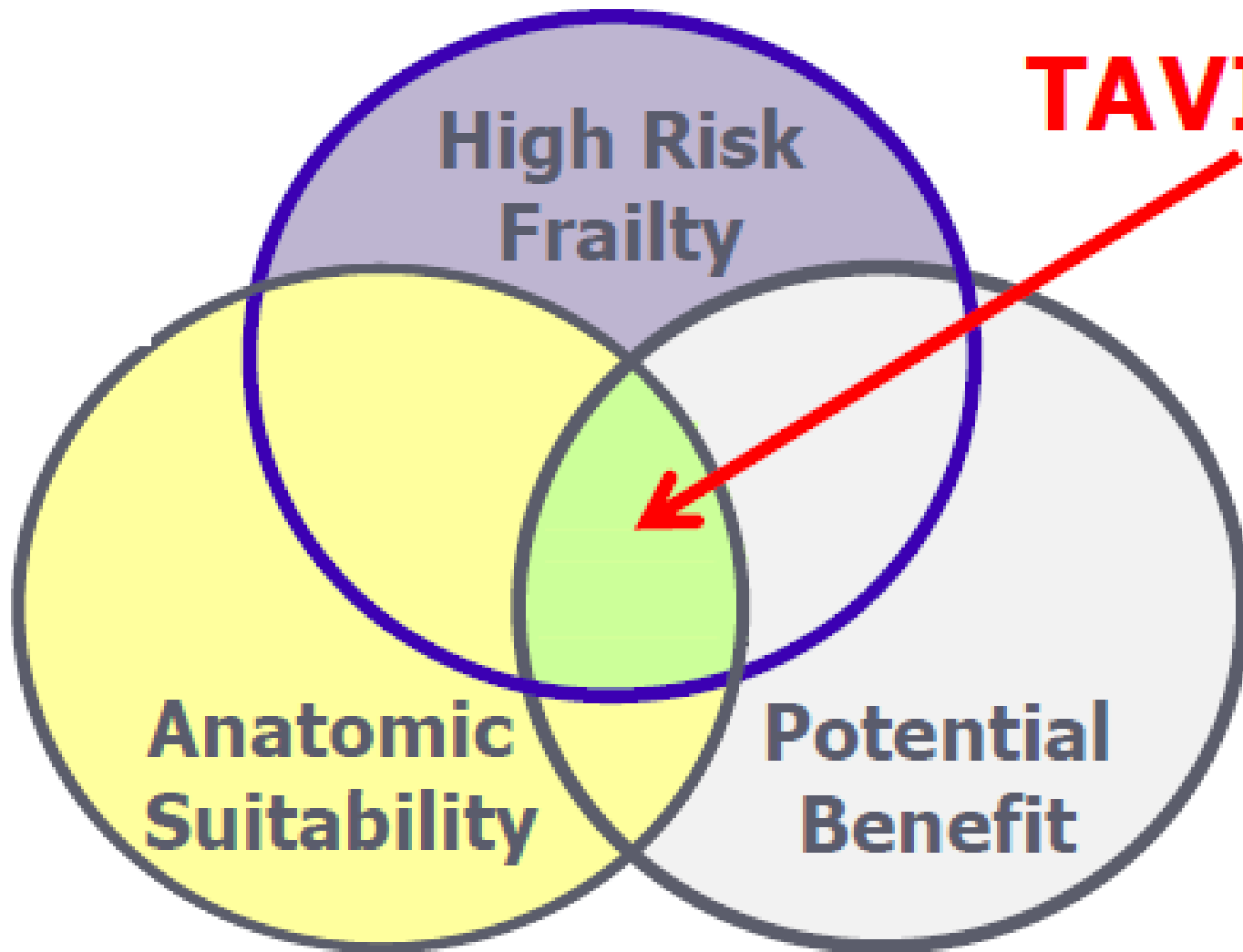
Fried Frailty Index

Fried Phenotype of Frailty

Weight Loss (unintentional)	> 10 lbs in last year
Grip strength	Lowest 20% by gender/BMI
Exhaustion	Self-report (CES-D depression scale)
Walk time, 15 feet	Lowest 20% by gender/height
Low activity	Males < 383 kcal/week Females < 270 kcal/week

Frailty: ≥ 3 criteria

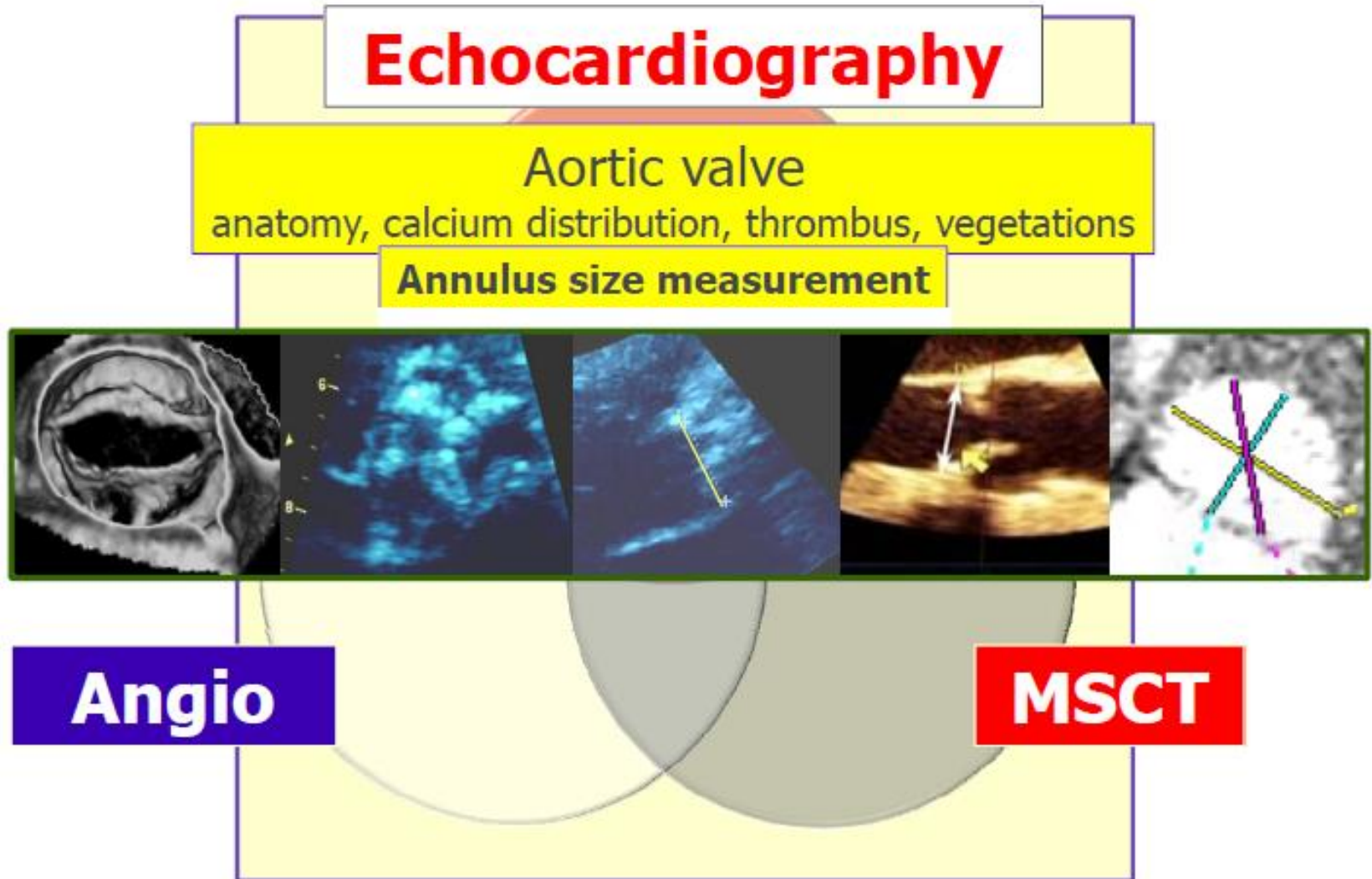
Intermediate/prefrail: 1 or 2 criteria



TAVI Spot

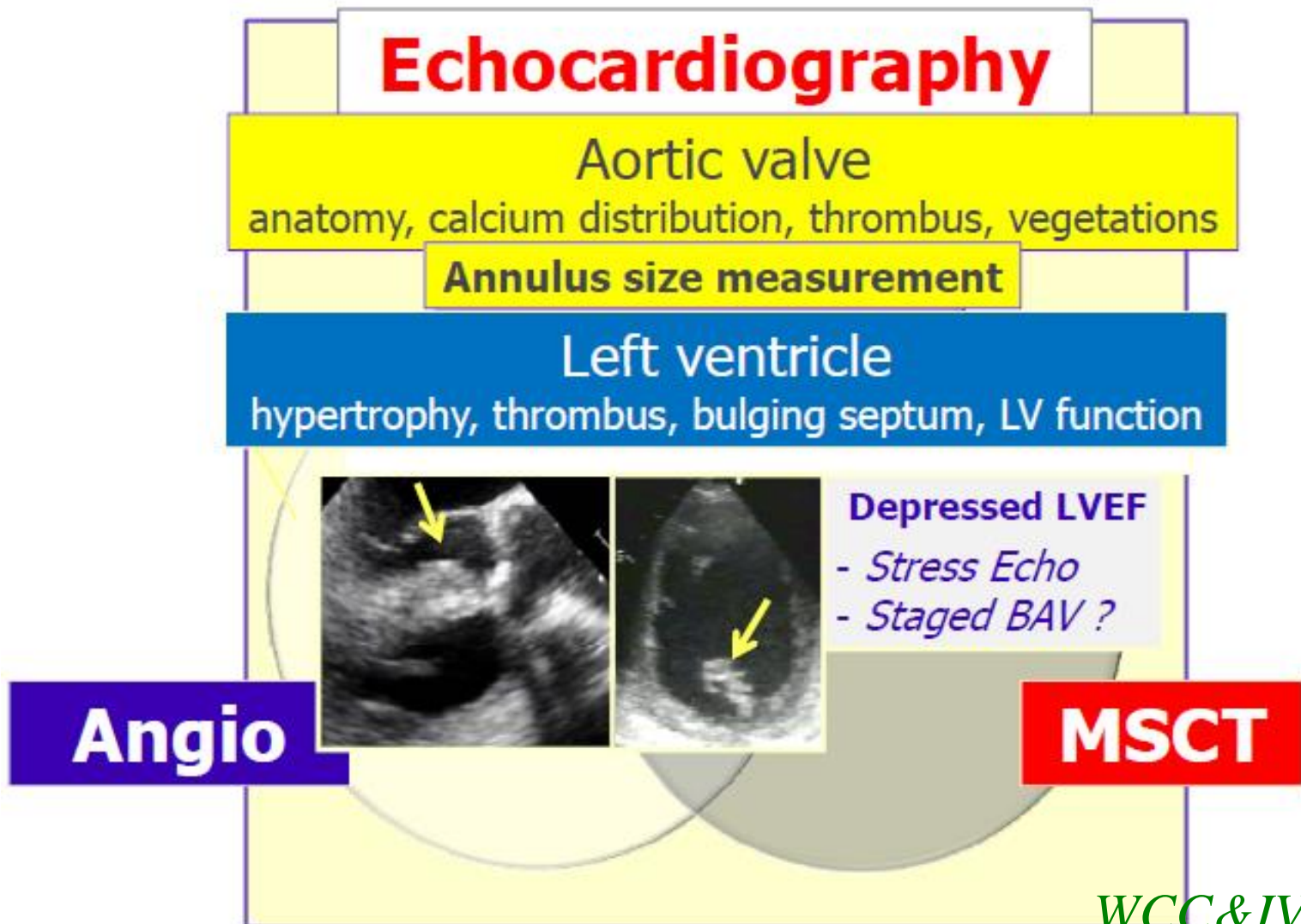
Is the anatomy suitable for TAVI?

An essential multidisciplinary approach



Is the anatomy suitable for TAVI?

An essential multidisciplinary approach



Is the anatomy suitable for TAVI?

An essential multidisciplinary approach

Echocardiography

Aortic valve

anatomy, calcium distribution, thrombus, vegetations

Annulus size measurement

Left ventricle

hypertrophy, bulging septum, LV function

Aorta

size, angulation, disease

An



Is the anatomy suitable for TAVI?

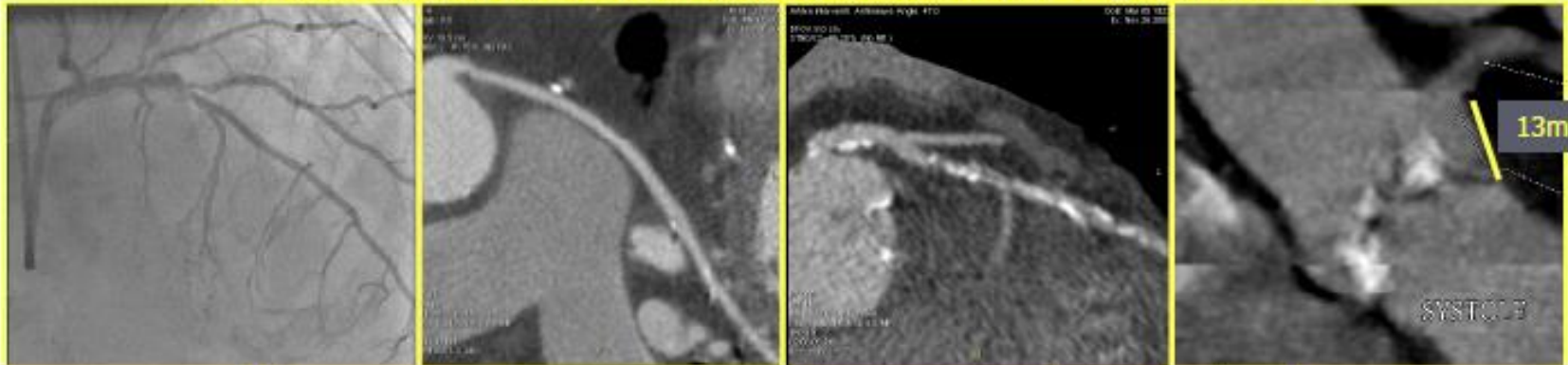
An essential multidisciplinary approach

Echocardiography

Aortic valve

anatomy, calcium distribution, thrombus, vegetations

13mm



13mm

SYSTOLE

Angio

Coronary arteries
associated CAD
staged PTCA?
distance ostia to annulus

MSCT

Is the anatomy suitable for TAVI?

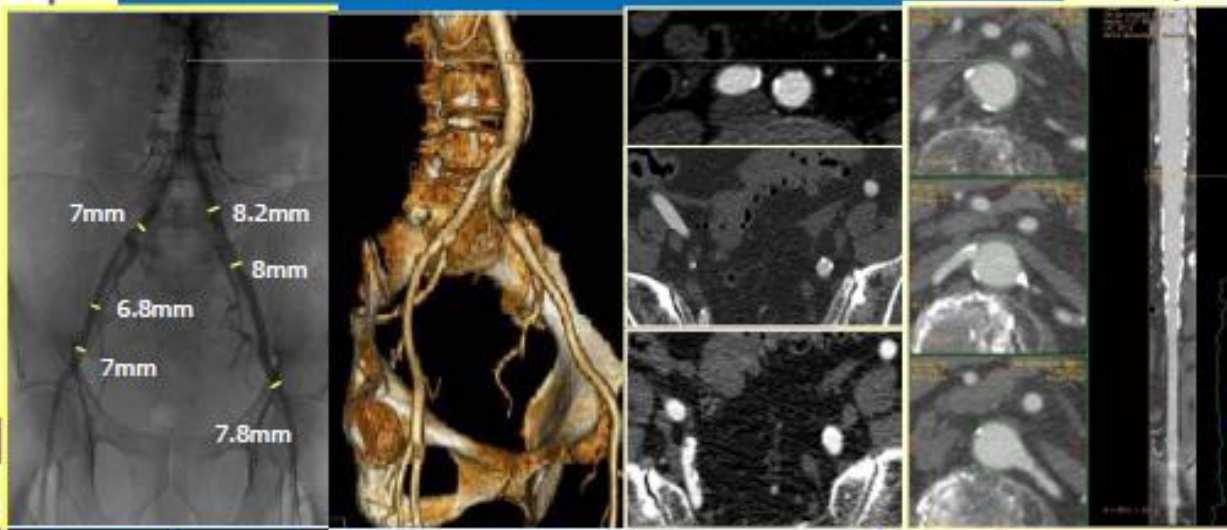
An essential multidisciplinary approach

Echocardiography

Aortic valve

anatomy, calcium distribution, thrombus, vegetations

Annulus size measurement



13mm

Ang

T

Vascular access

Anatomy, tortuosities, minimal diameters, calcification, disease

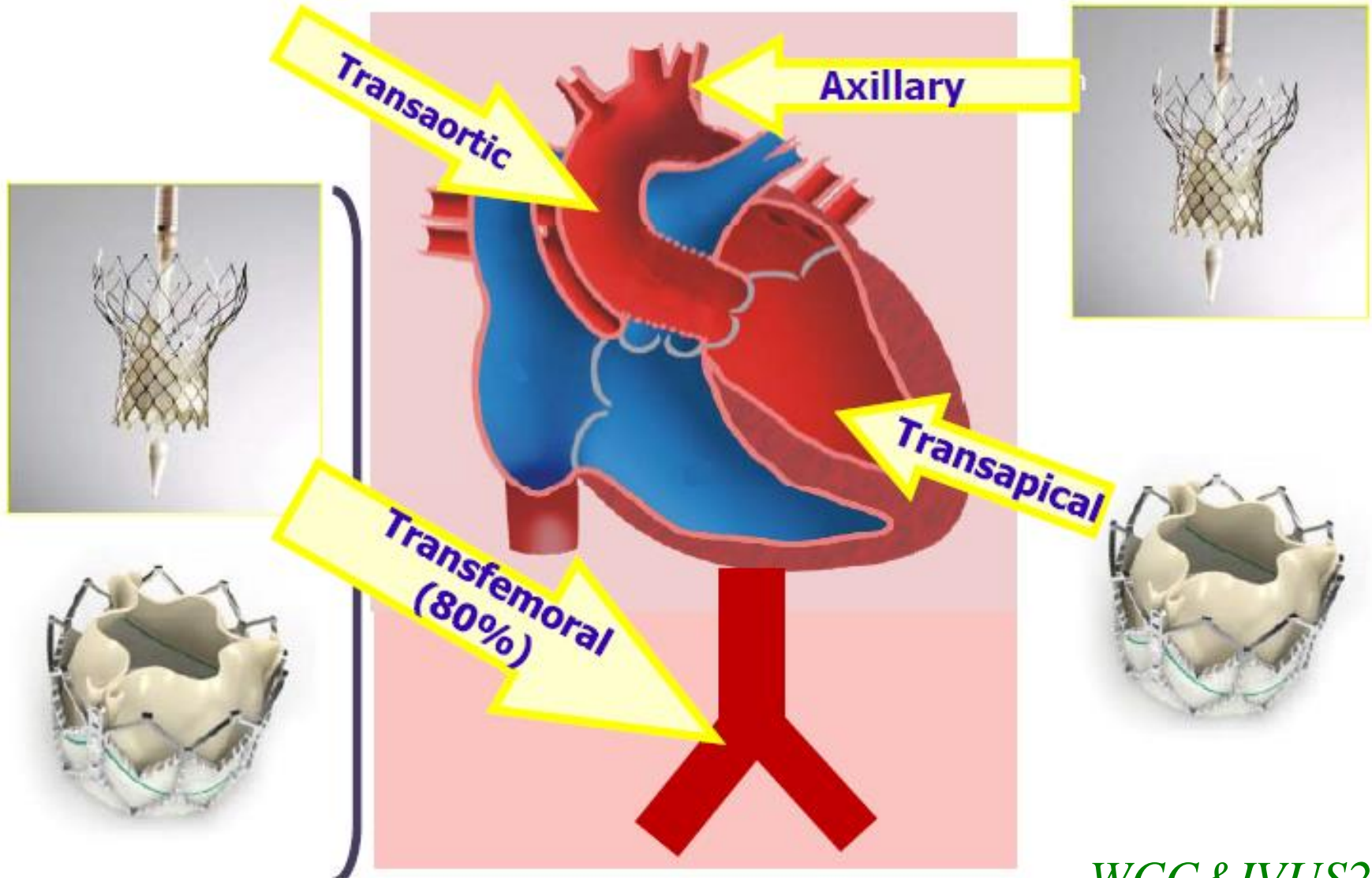
Post-evaluation HEART TEAM Meeting



Any cardiac or non cardiac contra-indication?
Any relative contra-indication?
Any need for staged PTCA or balloon valvuloplasty?

The Heart Team during TAVI

Current approaches



The Heart Team during TAVI

Transapical

Ideally in HYBRID room

- One Interventional Cardiologist
- Two Cardiac Surgeons



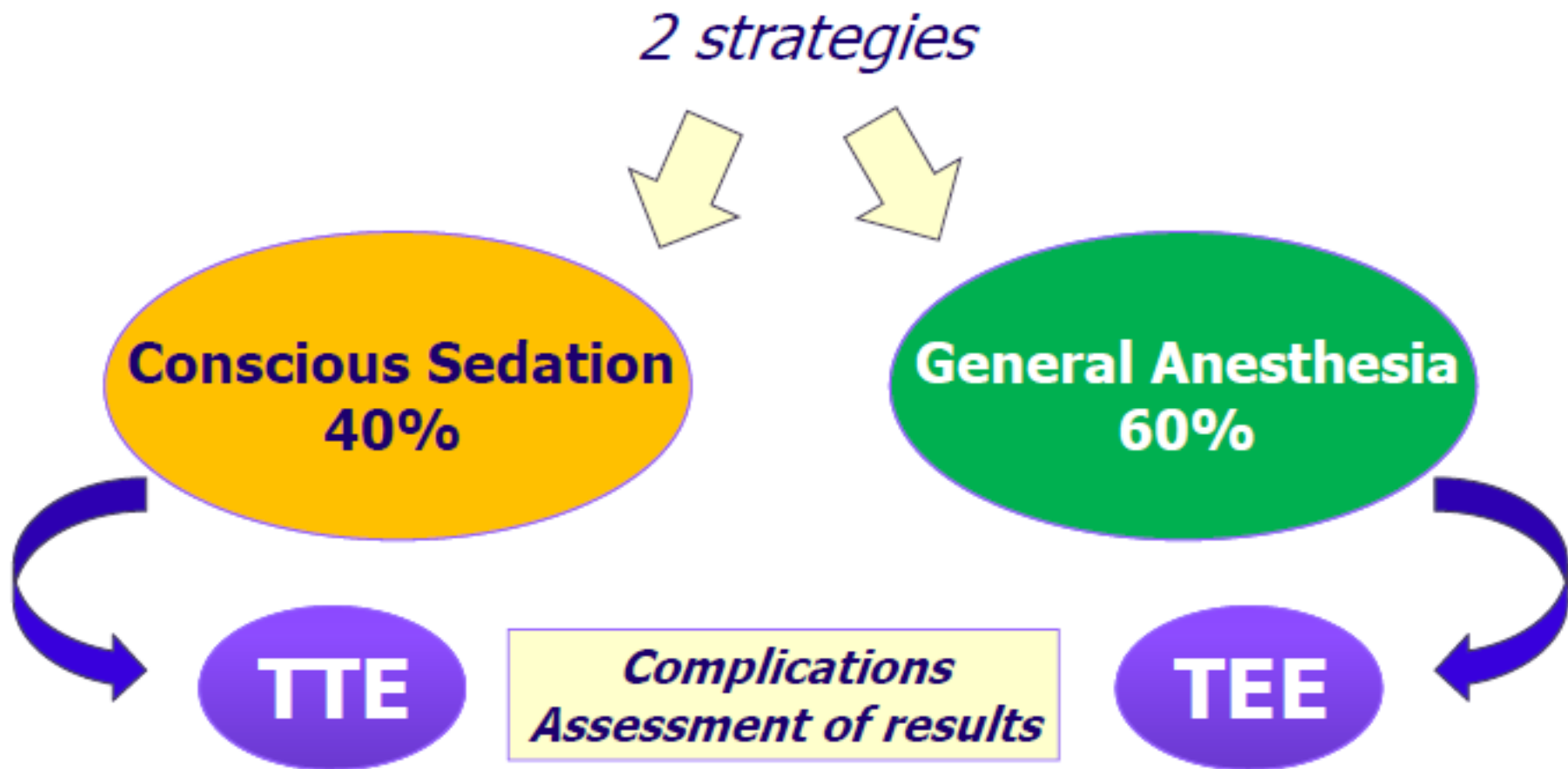
TEE echocardiographer

Anesthesiologists

Nurses dedicated to
valve crimping and rapid pacing



Which Heart Team during TAVI Transfemoral



Heart Team: POST-TAVI phase

- In-hospital management
- Compliance to Registries
(ideally with a research nurse)
- Organize the follow-up

Conclusion

- Building a solid and enthusiastic Heart Team is crucial for any center planning to start a program of TAVI
- An outstanding cooperative work is required for patient selection, completion of the procedure, management of complications, post-TAVI care and follow-up
- Optimal training and personal preparation of each member of the Heart Team are the key for safe and successful TAVI procedures

" I CAN DO
THINGS YOU
CANNOT,
YOU CAN DO
THINGS I
CANNOT;
TOGETHER
WE CAN DO
GREAT THINGS."

-MOTHER TERESA