

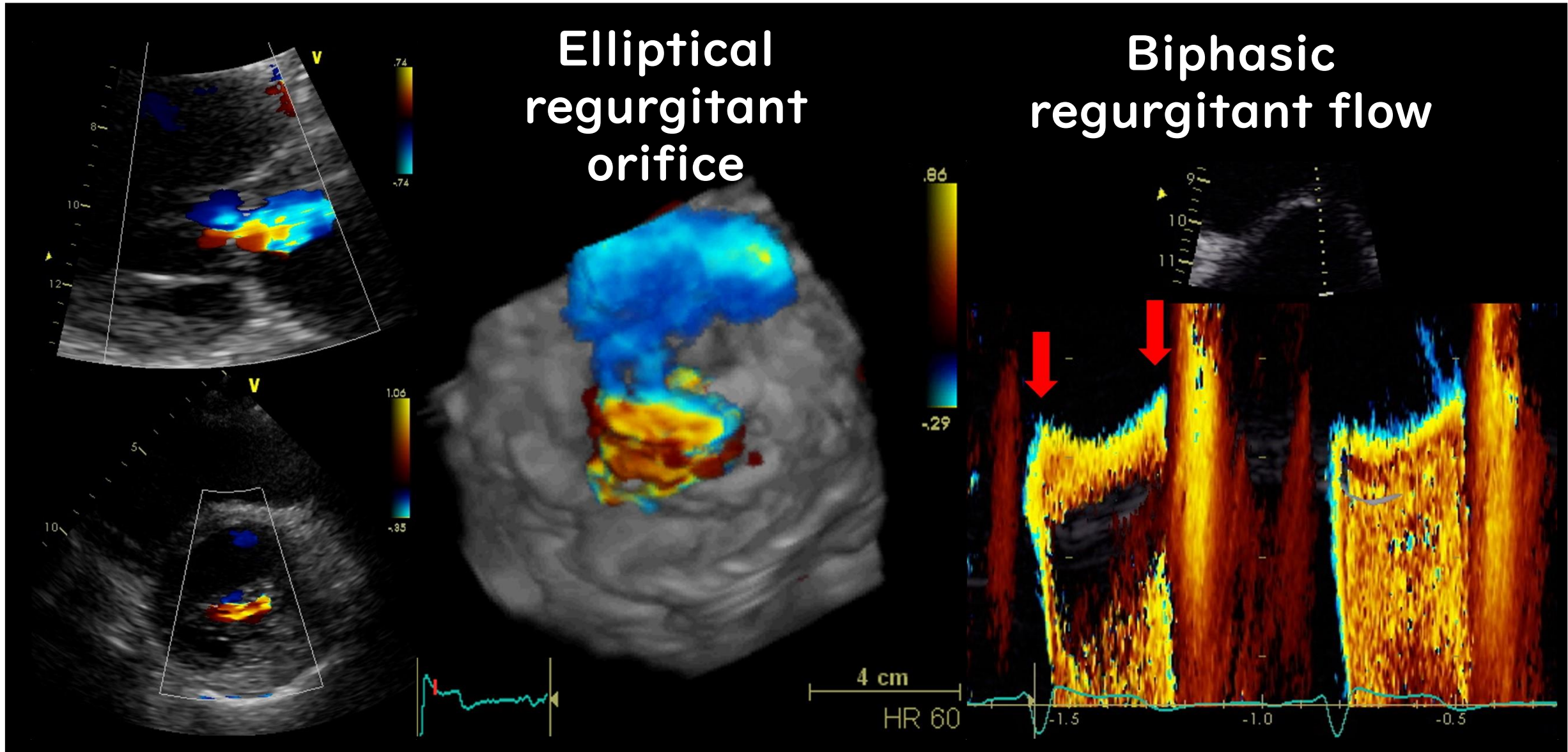
Revisiting the threshold for secondary mitral regurgitation management

Session : Game-changers in valvular heart disease
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Characteristics of functional MR



Quantification of MR

① Pulse Doppler

$$CSA_{MV} \text{ (blue circle)} \times VTI_{MV} \text{ (blue triangle)} - SV_{LVOT} = \text{RegVol}$$

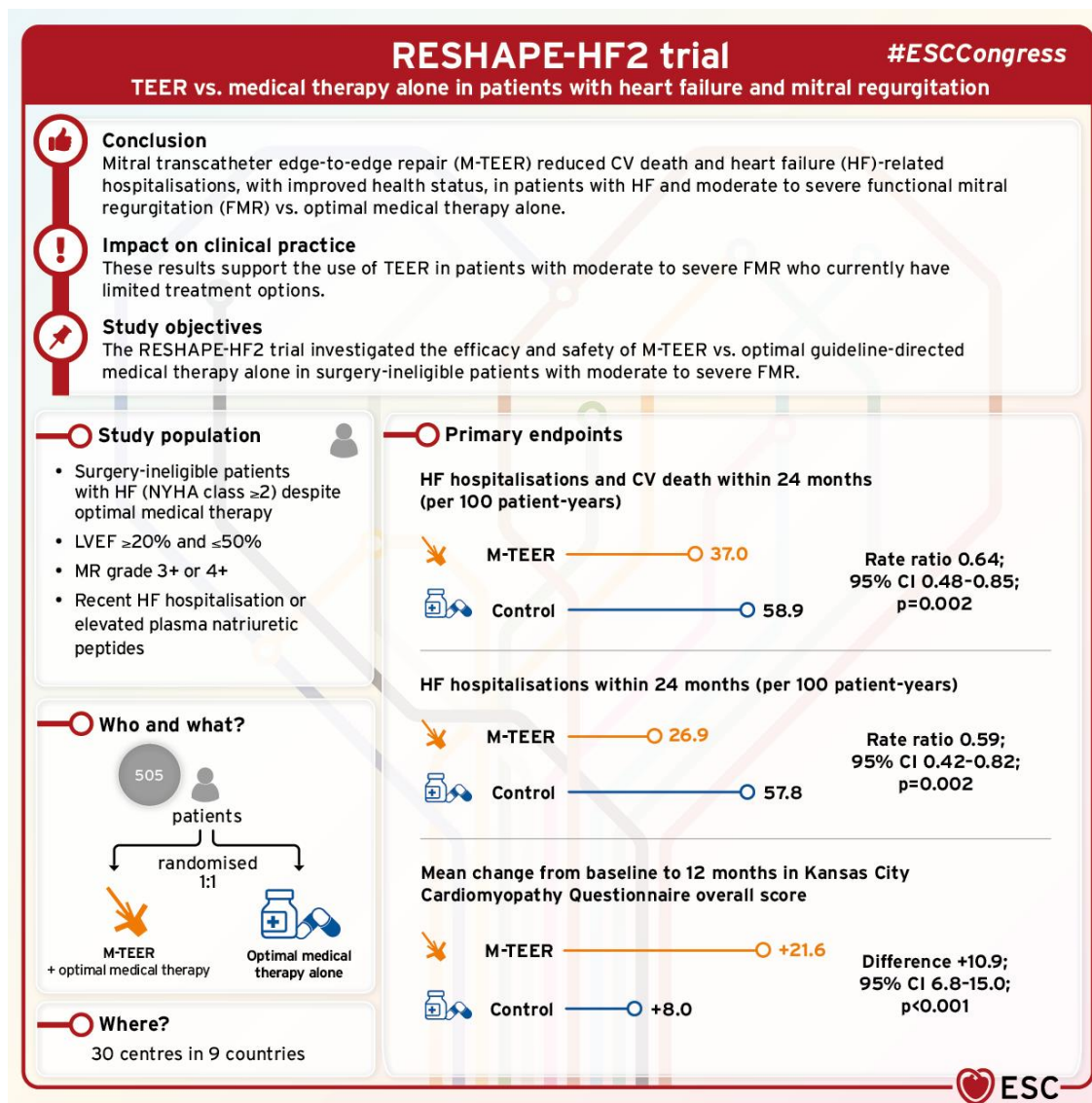
② Volumetric

$$EDV \text{ (red ventricle)} - ESV \text{ (pink ventricle)} - SV_{LVOT} = \text{RegVol}$$

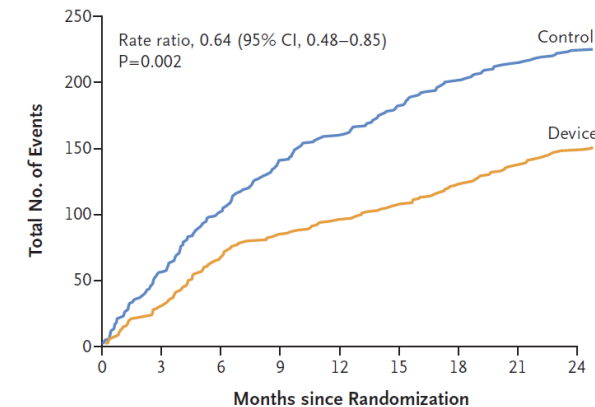
③ PISA

$$EROA \text{ (red circle)} \times VTI_{RegJet} \text{ (red inverted triangle)} = \text{RegVol}$$

RESHAPE-HF2 Trial



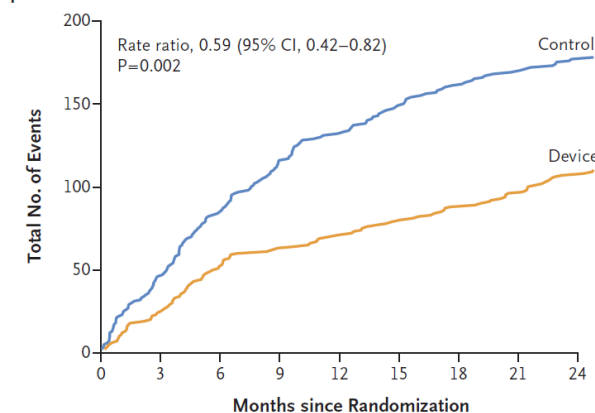
A Composite of Hospitalization for Heart Failure or Death from Cardiovascular Causes



No. at Risk

Control	255	240	223	204	189	179	165	155	146
Device	250	241	222	207	197	191	179	170	163

B Hospitalization for Heart Failure



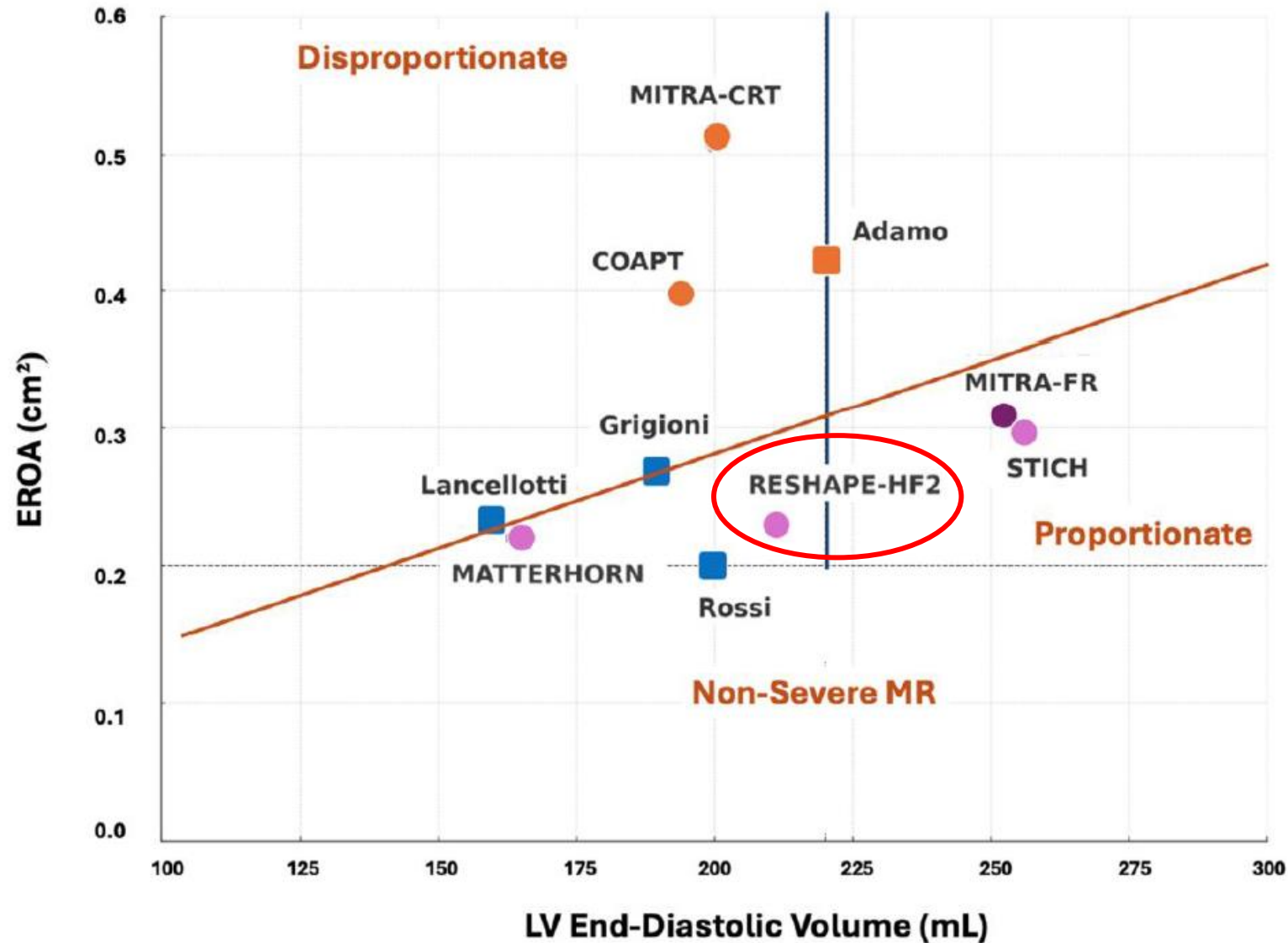
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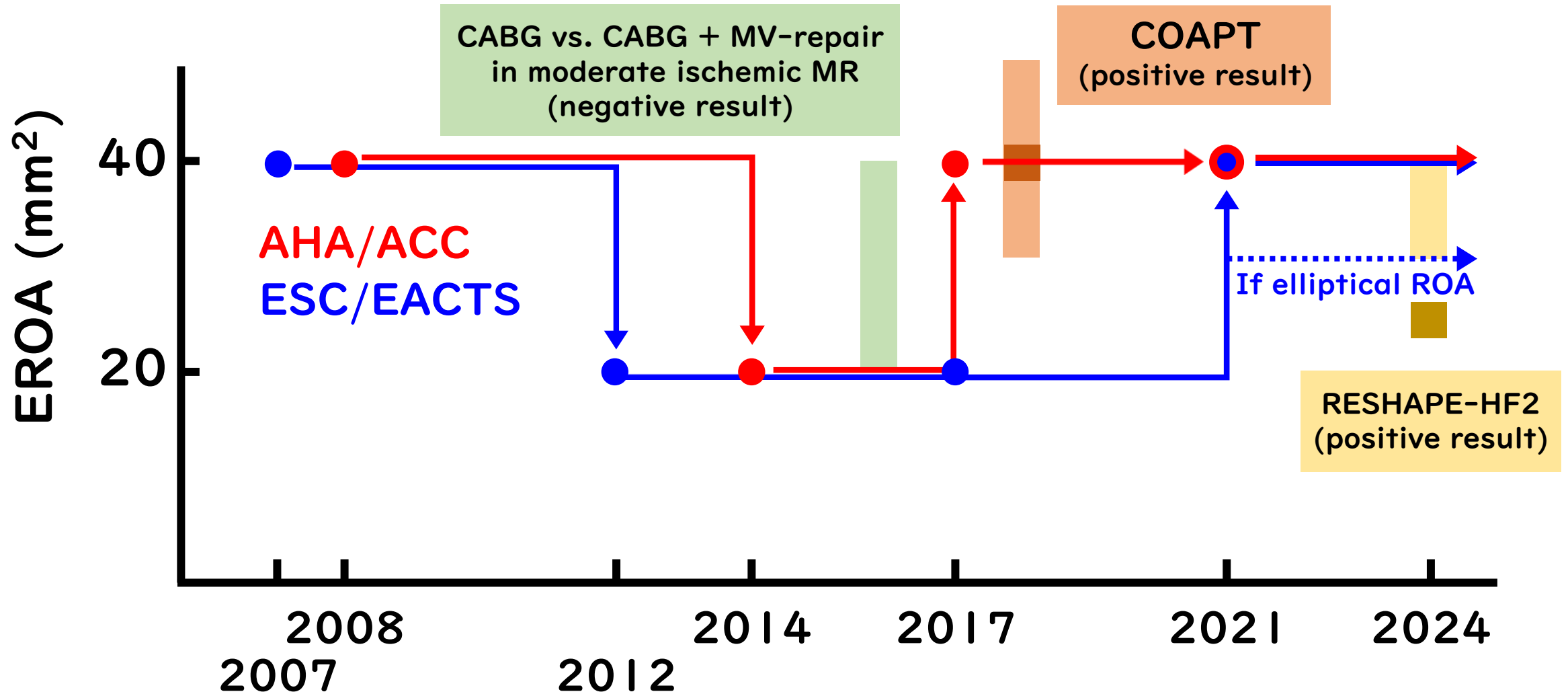
Revisiting secondary MR threshold severity

	COAPT (n = 614)	MITRA-FR (n = 304)	RESHAPE-HF2 (n = 506)	MATTERHORN (n = 208)	STICH (n = 204)^a
Trial intervention	TEER vs. control	TEER vs. control	TEER vs. control	TEER vs. Surgical	CABG vs. control
Age, years	72 ± 11	70 ± 10	70 ± 10	71 ± 8	61 ± 9
Sex (male)	64%	75%	80%	60%	82
Aetiology— <i>ischaemic</i>	61%	59%	65%	44%	100%
EuroSCORE II, median (IQR)	NR	6.6 (3.5–11.9) ^b	5.3 (2.8–9.0)	3.0 (1.7–4.3)	NR
6-min walk distance, m	240 (146–331)	310 ± 126 ^c	292 ± 107	347 (240–400)	307 ± 113
ACEI or ARB or ARNI	67%	84%	82%	70%	NR
Beta-blocker	90%	90%	96%	84%	NR
Diuretics	89%	99%	95%	NR	NR
SGLT2 inhibitor	NR	NR	9%	10%	NR
NYHA III/IV	61%	67%	75%	86%	52%
NT-proBNP, pg/mL	5174 ± 6567 ^b	3407 (1948–6790) ^b	4185 ± 4340 2745 (1407–5385)	NR	NR
eGFR, mL/min/1.73 m ²	49 ± 26	50 ± 20	56 ± 21	57 ± 21	NR
LV ejection fraction, %	31 ± 9	33 ± 6	31 ± 8	43 ± 12	27 ± 8
LV end-diastolic volume, (mL/m ²)	101 ± 34	135 ± 35	110 ± 40 ^d	86 ± 30 ^d	138 ± 46
EROA, cm ²	0.41 ± 0.15	0.31 ± 0.10	0.25	0.20 ± 0.10	0.30 ^e
Severe MR (EROA ≥ 0.4 cm ²)	41%	16%	14%	NR	21%
Mortality, control group	2 years: 46.1%	2 years: 34.2%	2 years: 29.6%	1 year: 8.3% ^b	5 years: 55% ^f
All heart failure hospitalization, control group	2 years: 67.9 per 100 patients-years	2 years: 106.9 per 100 patients-years	2 years: 46.6 per 100 patients-years	1 year: 3% ^b	NR

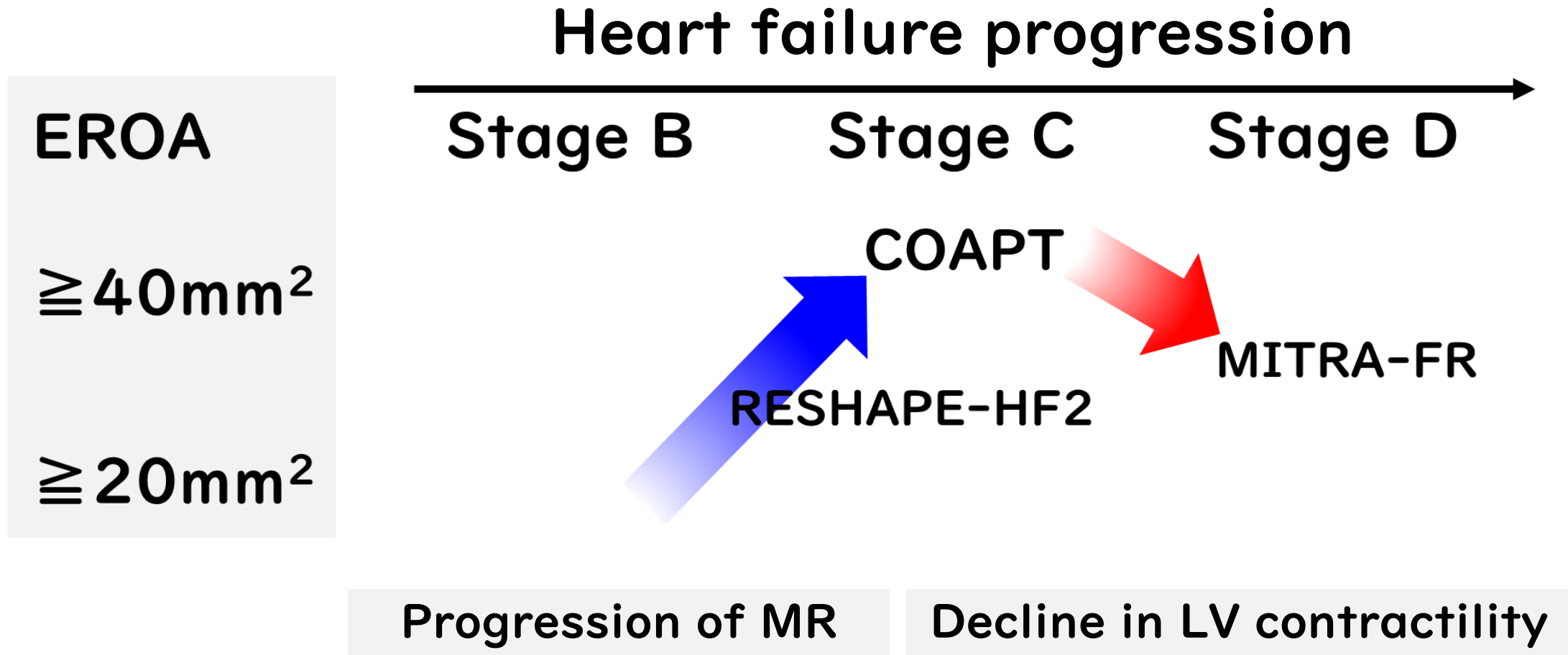
Revisiting secondary MR threshold severity



Evolution of diagnostic criteria for functional severe MR



Management of HF by Early TEER



Key messages

- ✓ The RESHAPE-HF2 trial highlights the need to reconsider the current EROA threshold for secondary MR intervention.
- ✓ TEER has shown to be beneficial even in patients with lower MR severity, suggesting that earlier intervention could improve outcomes.
- ✓ A more dynamic and integrated approach, considering both MR severity and LV remodeling, is essential for optimizing patient selection and treatment success.