Gruppo 6

Quando l'Obesità richiede un trattamento diagnostico-terapeutico multidisciplinare

SEMPRE!

Anamnesi

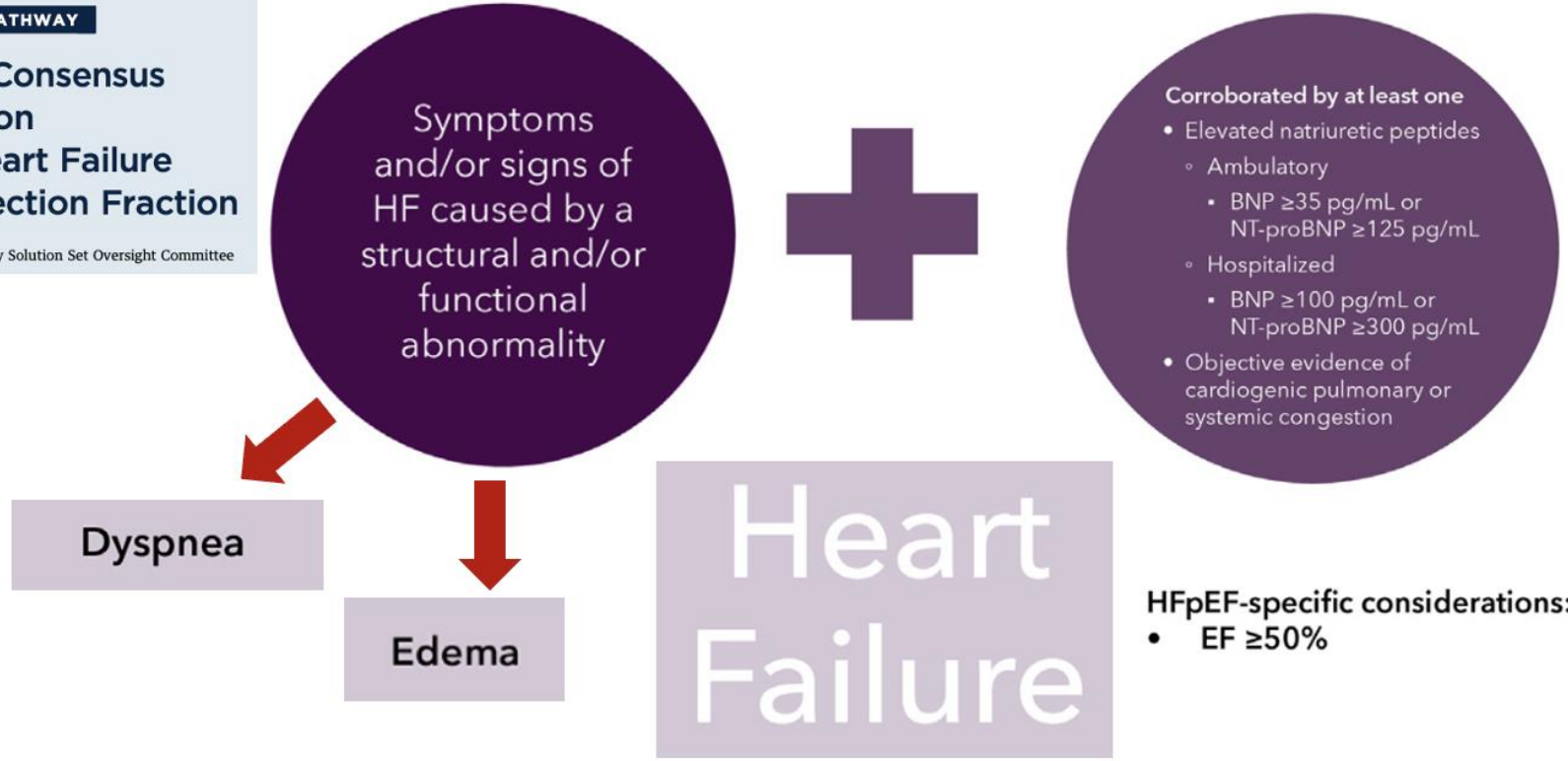
- **Donna, 56 anni**
- **OSAS** in CPAP
- **Obesità - BMI 37 kg/m2**
- **Rene a ferro di cavallo** e **presenza di piccolo tramite reno-cavale** emodinamicamente irrilevante
- Inviata **dalll'MMG** in **valutazione cardiologica**
- **Dispnea da sforzo progressiva (NYHA II-III)** dall'estate 2024

HFpEF Diagnosis

EXPERT CONSENSUS DECISION PATHWAY

2023 ACC Expert Consensus Decision Pathway on Management of Heart Failure With Preserved Ejection Fraction

A Report of the American College of Cardiology Solution Set Oversight Committee



HFpEF-specific considerations:
- EF ≥50%

HFpEF-specific considerations:
- Lower levels of natriuretic peptides relative to HFrEF for a given elevation in left ventricular end-diastolic pressure
- Higher BMI (prevalent in HFpEF) is inversely associated with natriuretic peptide levels

Biomarker (Sinus rhythm)
NT-proBNP >220 pg/mL or BNP >80 pg/mL

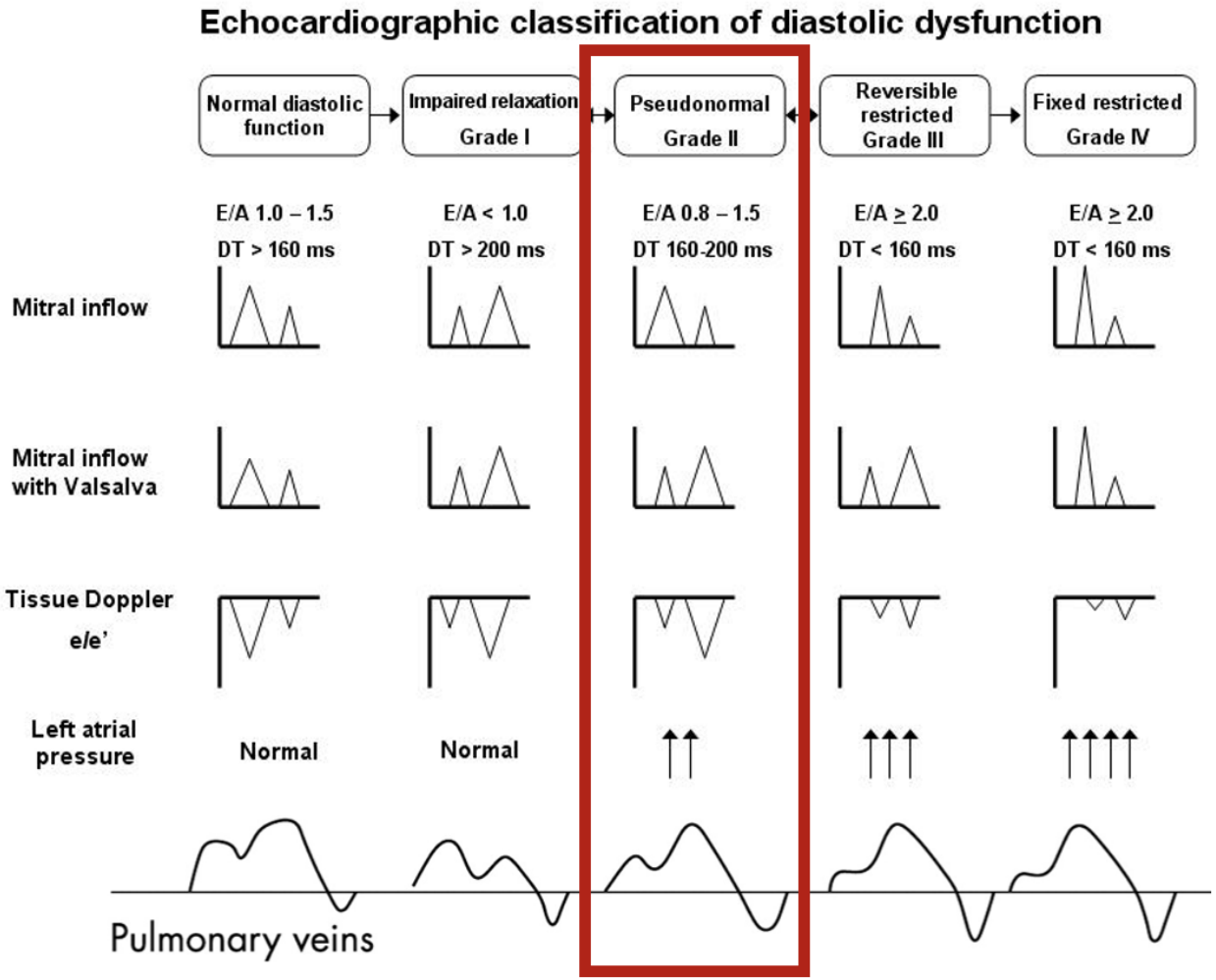
Biomarker (Atrial Fibrillation)
NT-proBNP >660 pg/mL or BNP >240 pg/mL

Kittleson MM et al., 2023 ACC Expert Consensus Decision Pathway on Management of Heart Failure With Preserved Ejection Fraction. J Am Coll Cardiol. 2023 May 9;81(18):1835-1878.

Esami di Laboratorio

Parametro	Valori di riferimento	Significato clinico
Hb (g/dL)	**13.9 (vn 12–16)**	Normale → **esclude anemia ipercinetica**
Hct (%)	**41 (vn 36–46)**	Normale
MCV (fL)	**88 (vn 80–96)**	Normale, **assenza di anemia carenziale**
Ferritina (ng/mL)	**96 (vn 30–400)**	Normale → **nessuna carenza marziale**
Transferrina (mg/dL)	**245 (vn 200–360)**	Nella norma
Saturazione transferrina (%)	**31 (vn 20–45)**	Normale → **riserva marziale adeguata**
Creatinina (mg/dL)	**0.74 (vn 0.6–1.1)**	Normale → funzione renale conservata
Urea (mg/dL)	**23 (vn 15–45)**	Normale → assenza di iperperfusione renale significativa
Na^+ / K^+ (mEq/L)	**140 / 4.1**	Normali
AST / ALT (U/L)	**21 / 24 (vn <40)**	Normali → nessuna congestione epatica
TSH / fT_4 / fT_3	**2.0 / 1.1 / 3.3 (vn 0.4–4.0 / 0.8–1.7 / 2.0–4.4)**	Eutiroidismo → **esclude tireotossicosi**
HbA1c (%)	**5.2 (vn <5.7)**	Normale → metabolismo glucidico fisiologico
LDL (mg/dL)	**108 (vn <130)**	Lieve dislipidemia → profilo metabolico "benigno"
NT-proBNP (pg/mL)*	**220 (vn <125)**	**Aumentato**
Vitamina B1 (tiamina)	—	Non carenziale (nessun sospetto clinico di Beri-Beri)

*correzione per BMI → x1.4-1.5
** WBC + formula ematochimica nei limiti

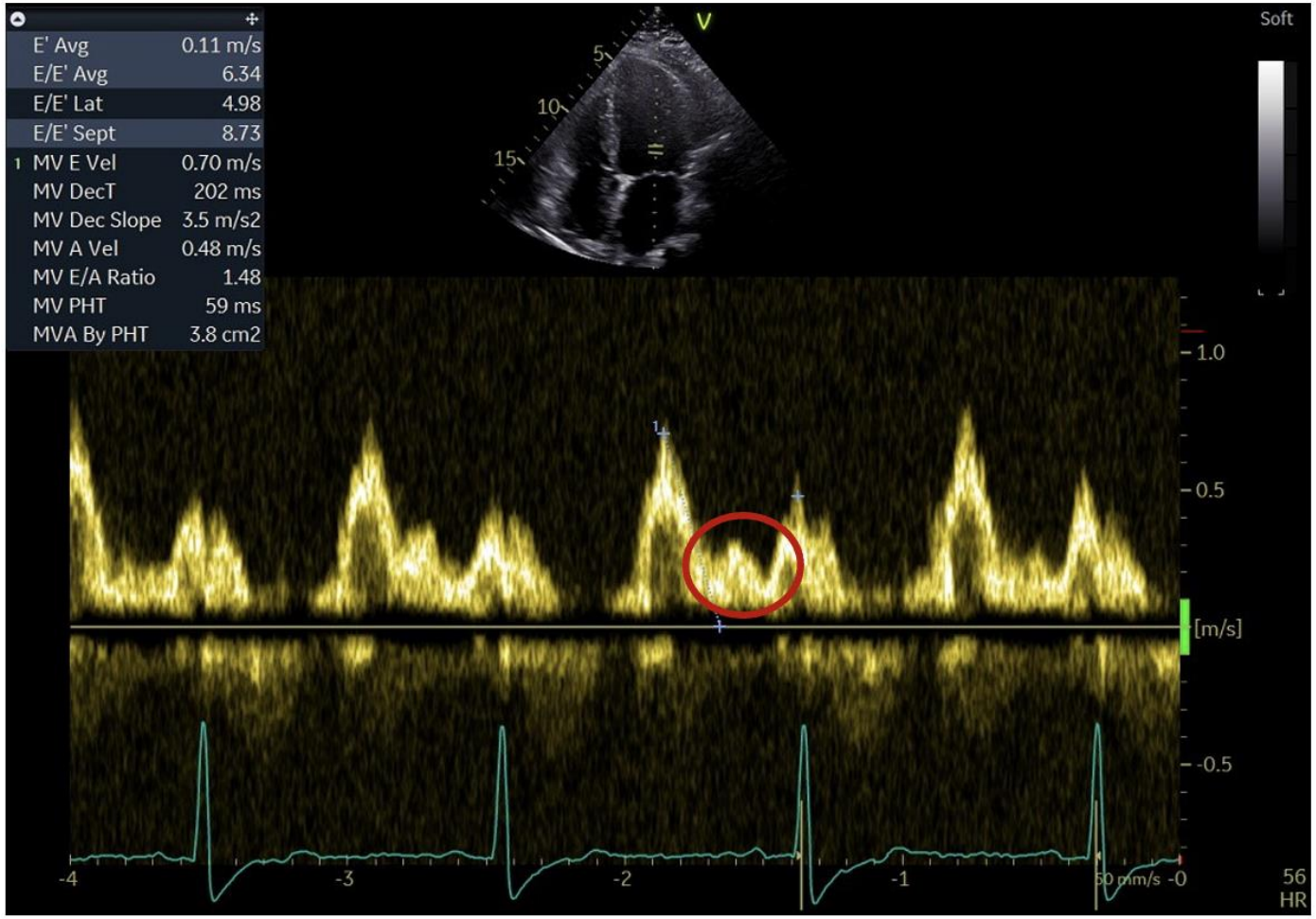


Pseudonormale

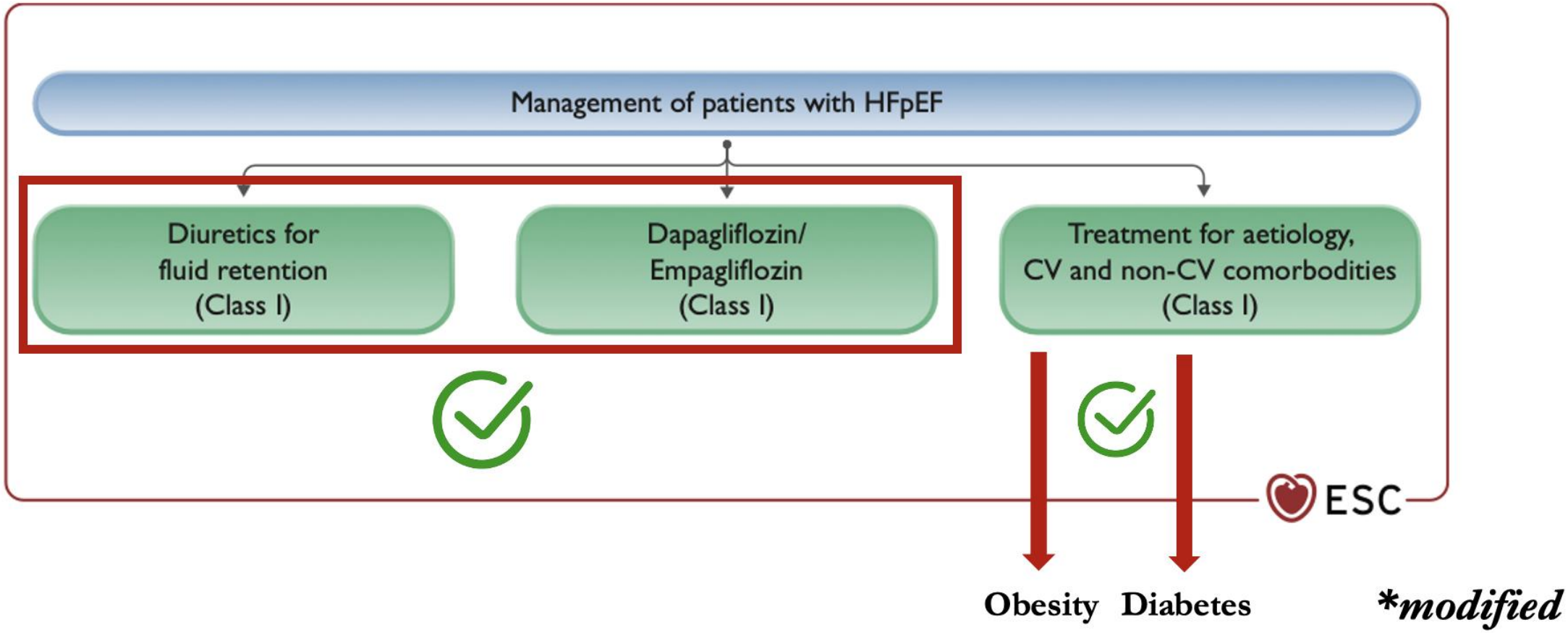
E/A 1-1.5
TdecE 150-200 ms
IVRT>90 ms

1. **Rilassamento** alterato
2. **LV compliance** alterata
3. **P atriale sx** lievemente aumentata

E/A – Onda L


E' Avg 0.11 m/s
E/E' Avg 6.34
E/E' Lat 4.98
E/E' Sept 8.73
1 MV E Vel 0.70 m/s
MV DecT 202 ms
MV Dec Slope 3.5 m/s2
MV A Vel 0.48 m/s
MV E/A Ratio 1.48
MV PHT 59 ms
MVA By PHT 3.8 cm2
Soft
1.0
0.5
[m/s]
-0.5
-4
-3
-2
-1
-0
56
HR

2023 HF Guidelines Update



McDonagh TA, et al. 2023 Focused Update of the 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure. Eur Heart J. 2023 Oct 1;44(37):3627-3639.

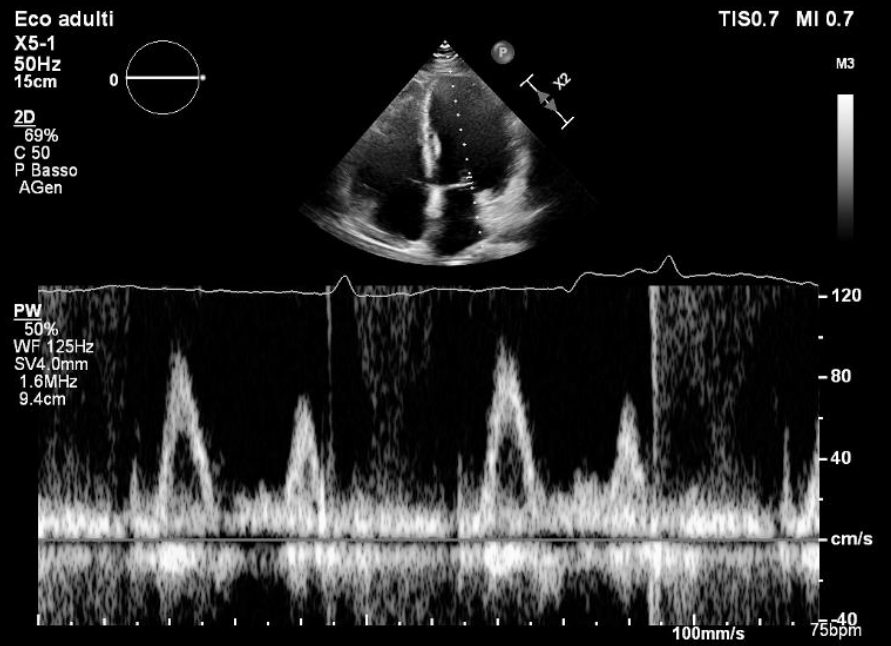
Paradosso

- **<u>Peggiora con il diuretico</u>**
- Migliora con l'Ivabradina (farmaco che riduce la frequenza cardiaca)

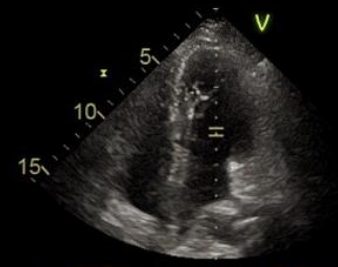
- Si **reca autonomamente** presso il Centro di Eccellenza per il Trattamento **dell'Obesità** – UniPD

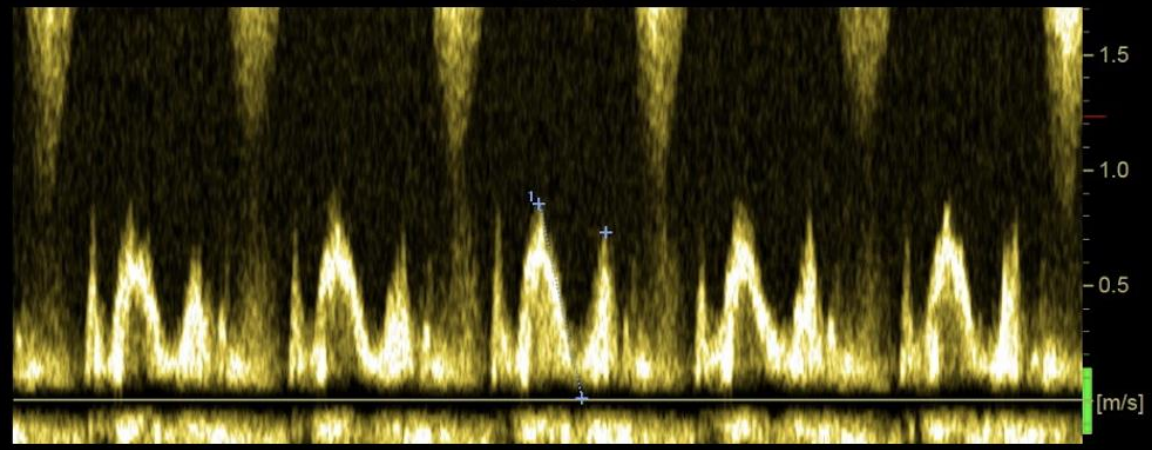
- Avvio di **Tirzepatide** + **dieta ipocalorica bilanciata** + **avvio di esercizio fisico** secondo schemi a Marzo con perdita di 8 kg a Luglio

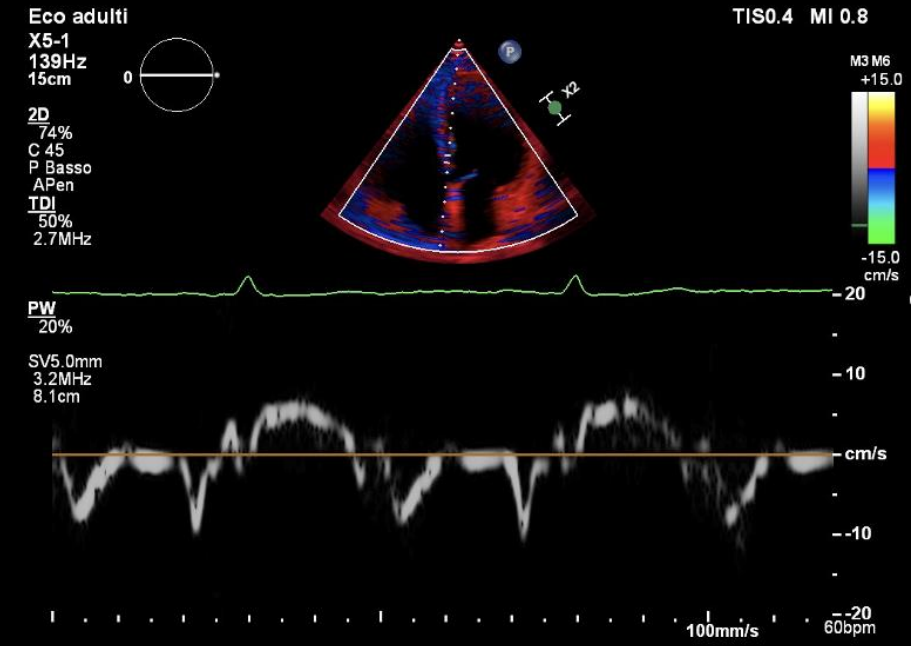
Marzo



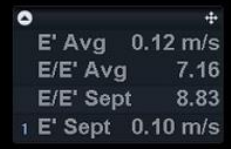
PW

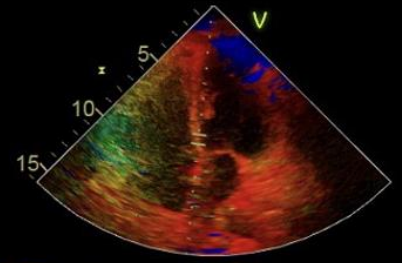




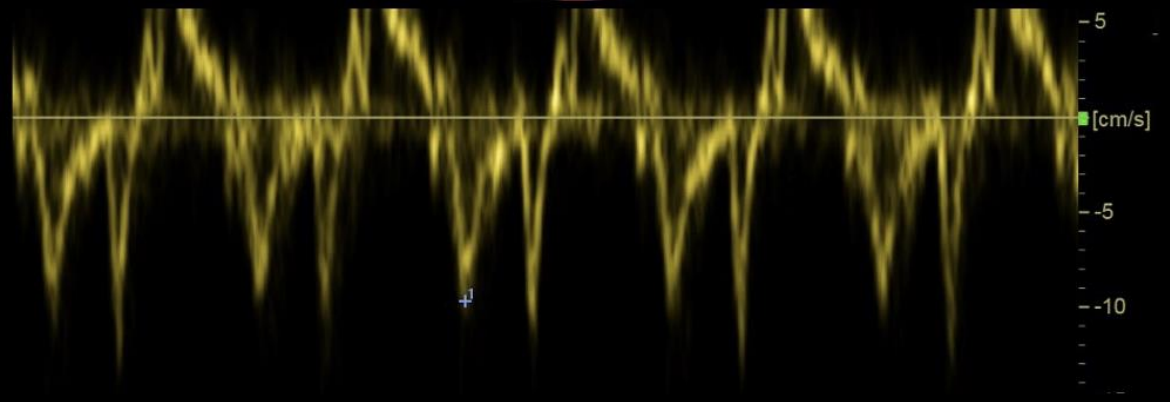


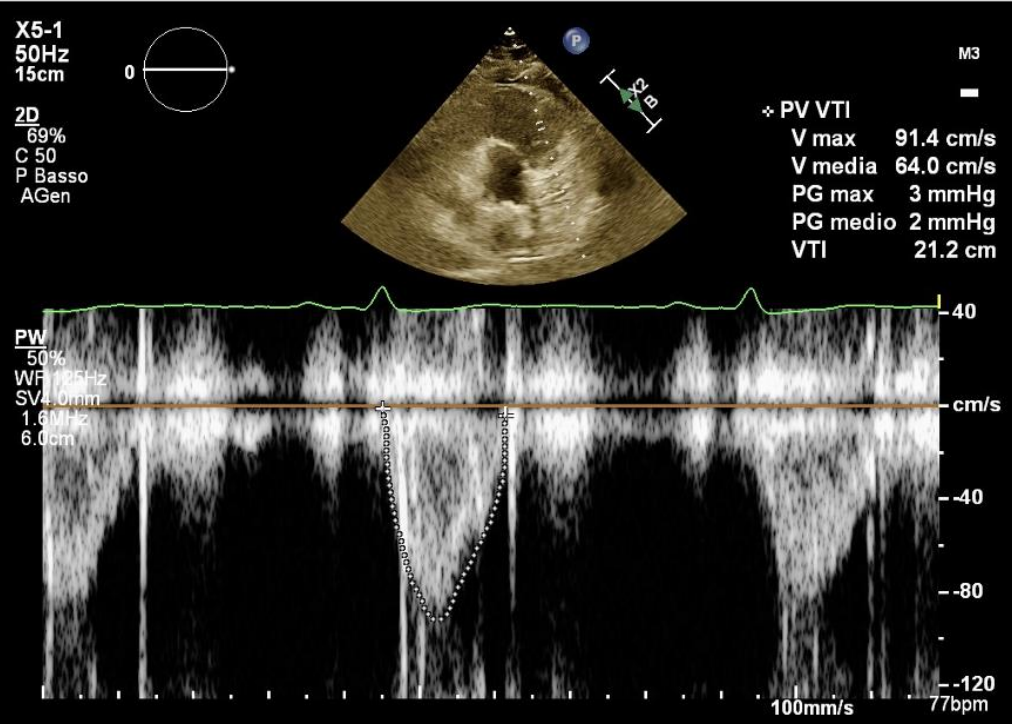
TDI

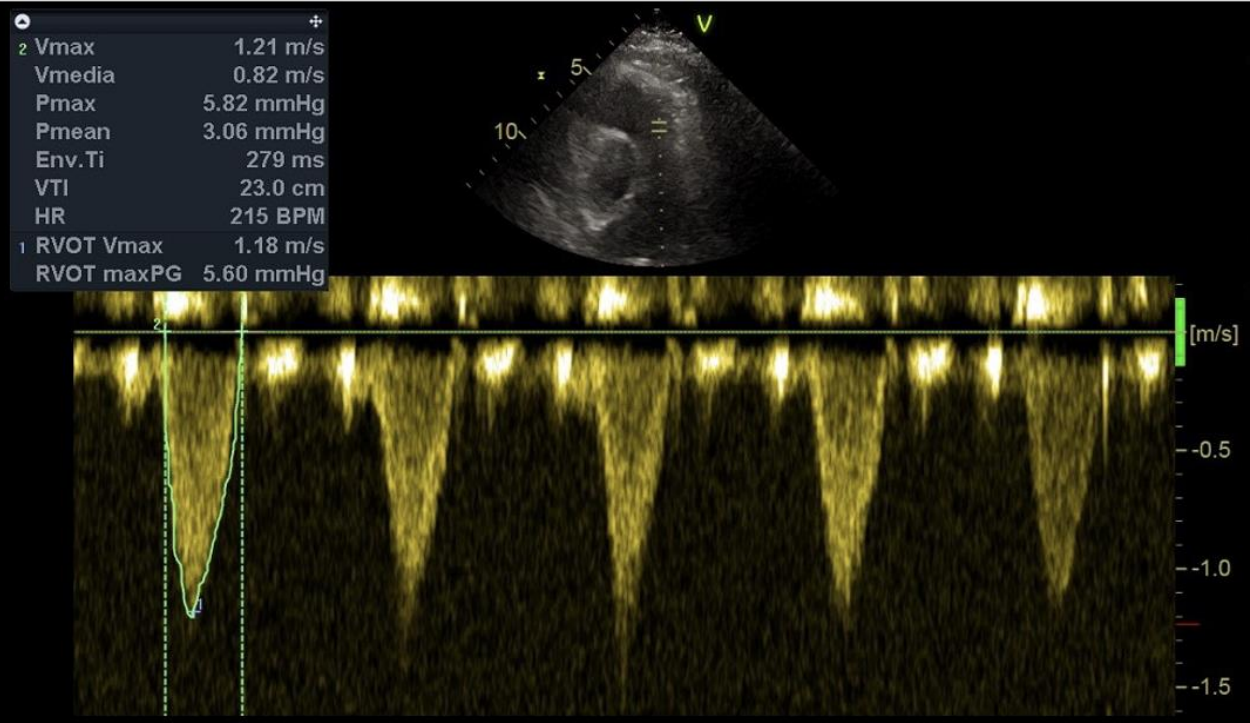




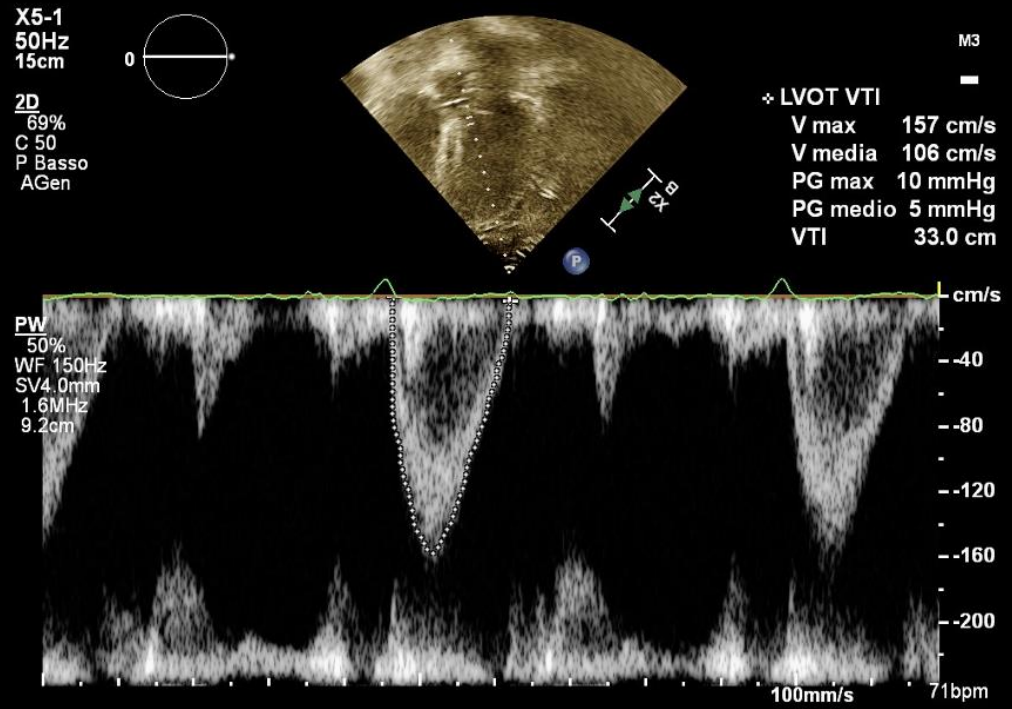
Agosto

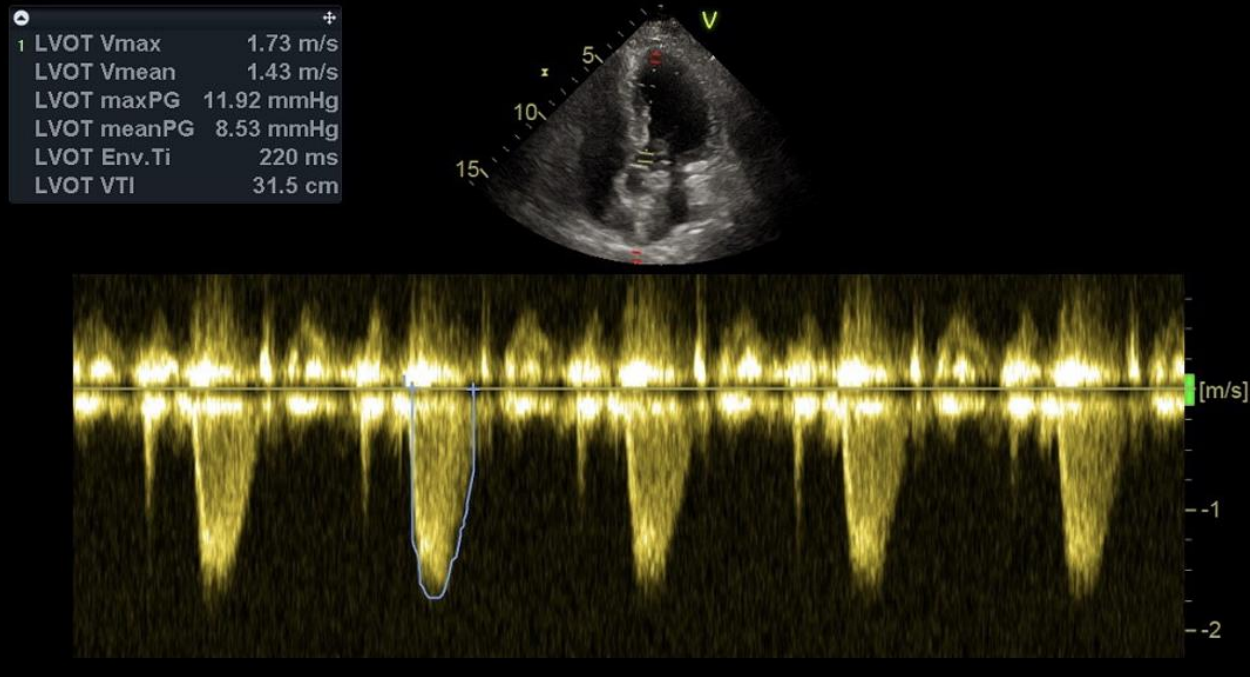




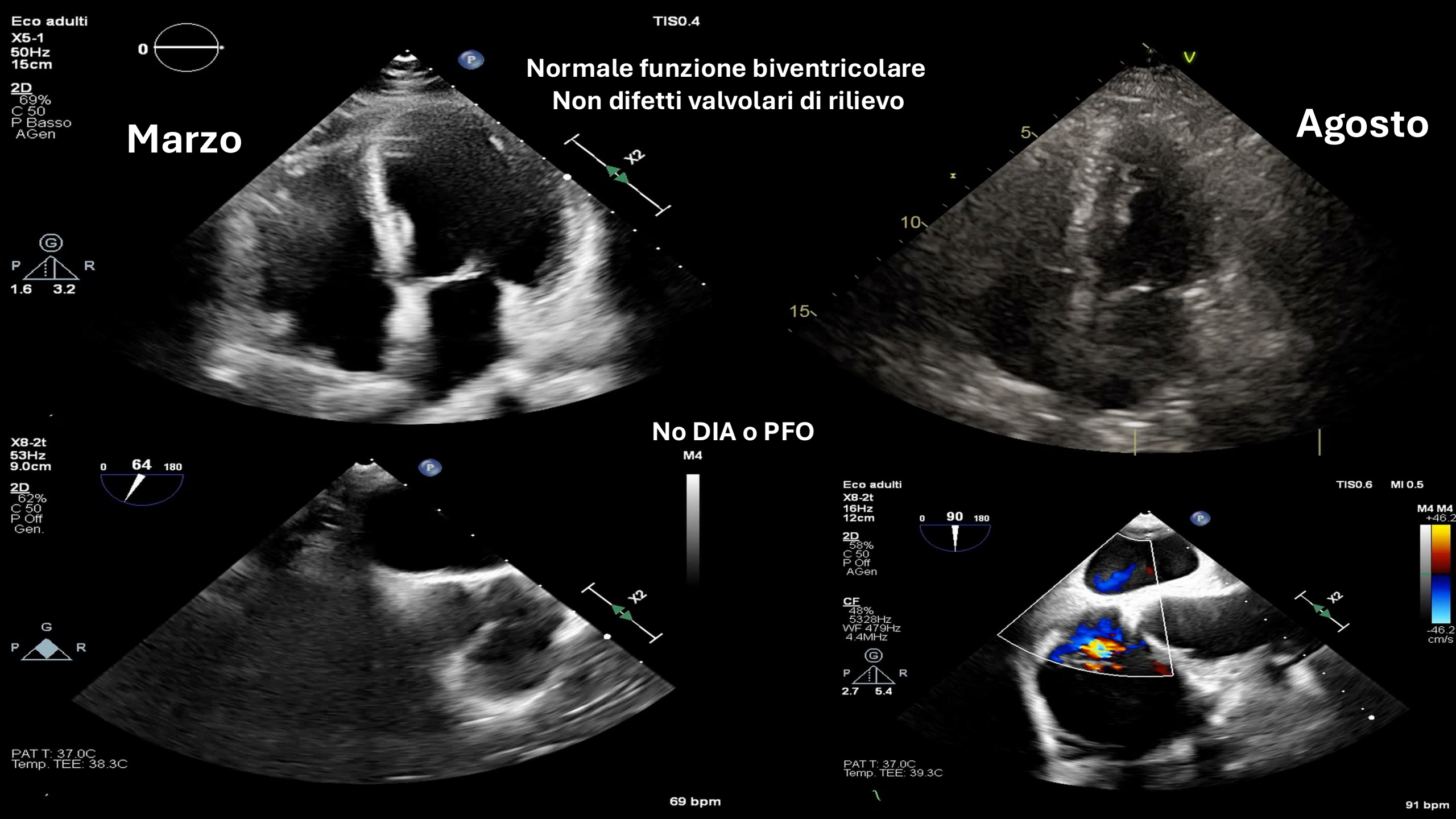


RVOT VTI

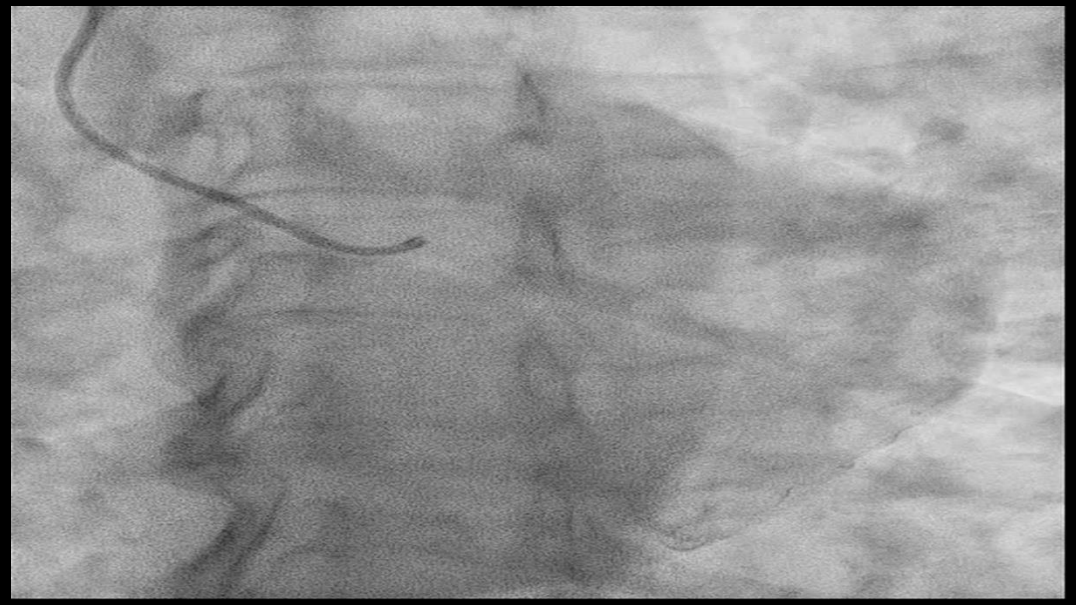




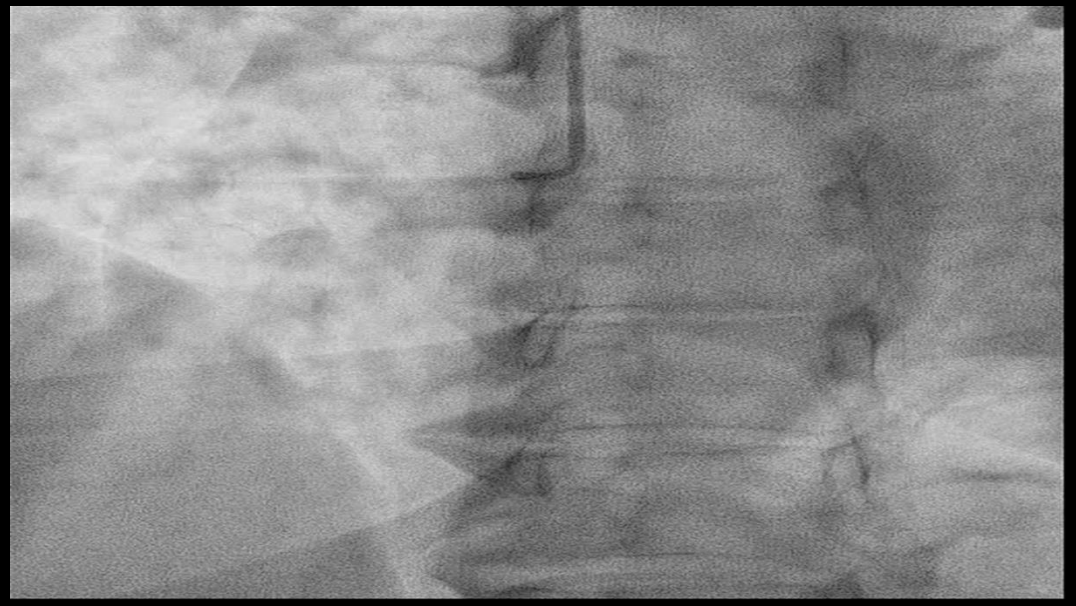
LVOT VTI


Eco adulti
X5-1
50Hz
15cm
2D
69%
C 50
P Basso
AGen
TIS0.4
Normale funzione biventricolare
Non difetti valvolari di rilievo
Marzo
Agosto
No DIA o PFO
X8-2t
53Hz
9.0cm
2D
62%
C 50
P Off
Gen.
M4
PAT T: 37.0C
Temp. TEE: 38.3C
69 bpm
Eco adulti
X8-2t
16Hz
12cm
2D
58%
C 50
P Off
AGen
CF
48%
5328Hz
WF 479Hz
4.4MHz
TIS0.6
MI 0.5
M4 M4
+46.2
-46.2
cm/s
PAT T: 37.0C
Temp. TEE: 39.3C
91 bpm

CORONAROGRAFIA



Circolo coronarico indenne da lesioni



«È forse una questione di distribuzione del grasso?»

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High-Output Heart Failure

A 15-Year Experience

Yogesh N.V. Reddy, MD, Vojtech Melenovsky, MD, PhD, Margaret M. Redfield, MD,
Rick A. Nishimura, MD, Barry A. Borlaug, MD

The NEW ENGLAND JOURNAL of MEDICINE
ESTABLISHED IN 1812 JANUARY 30, 2025 VOL. 392 NO. 5

Tirzepatide for Heart Failure with Preserved Ejection Fraction and Obesity

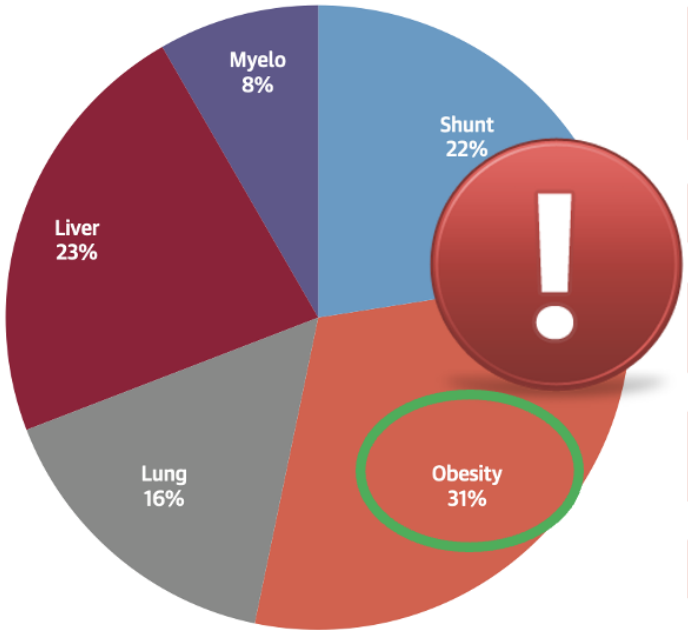
Milton Packer, M.D., Michael R. Zile, M.D., Christopher M. Kramer, M.D., Seth J. Baum, M.D., Sheldon E. Litwin, M.D., Venu Menon, M.D., Junbo Ge, M.D., Govinda J. Weerakkody, Ph.D., Yang Ou, Ph.D., Mathijs C. Bunck, M.D., Karla C. Hurt, B.S.N., Masahiro Murakami, M.D., and Barry A. Borlaug, M.D., for the SUMMIT Trial Study Group*

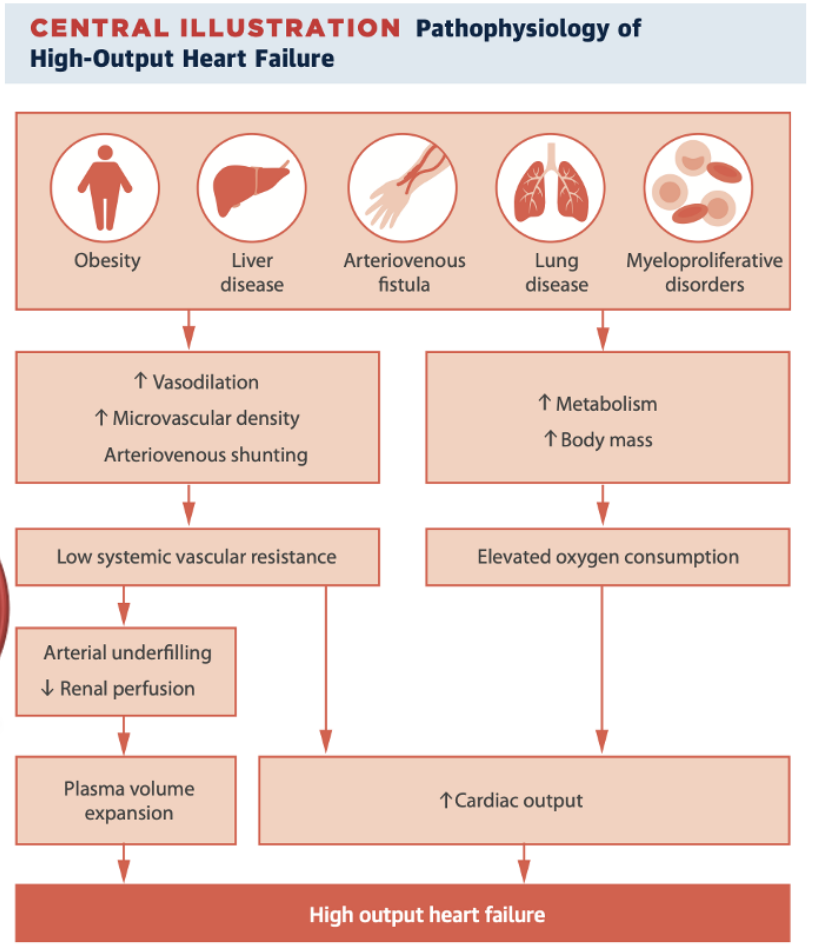
BB **Borlaug, Barry A., M.D.** 28 settembre 2025 alle ore 16:12
Re: [EXTERNAL] Obesity-related high-output heart failure - any abnormal adipose distribution (su... Dettagli
A: Alberto Guarnaccia

Hi Alberto,

Interesting case. I am afraid that we did not have information on the distribution of body fat. It is a good question for future study.

B





Reddy, Y.N.V. et al. J Am Coll Cardiol. 2016;68(5):473-82.

MR ADDOMINALE 2007 - 2009

Tessuto Adiposo Sottocutaneo >>> Viscerale

Adiposity-related High-Output Heart Failure

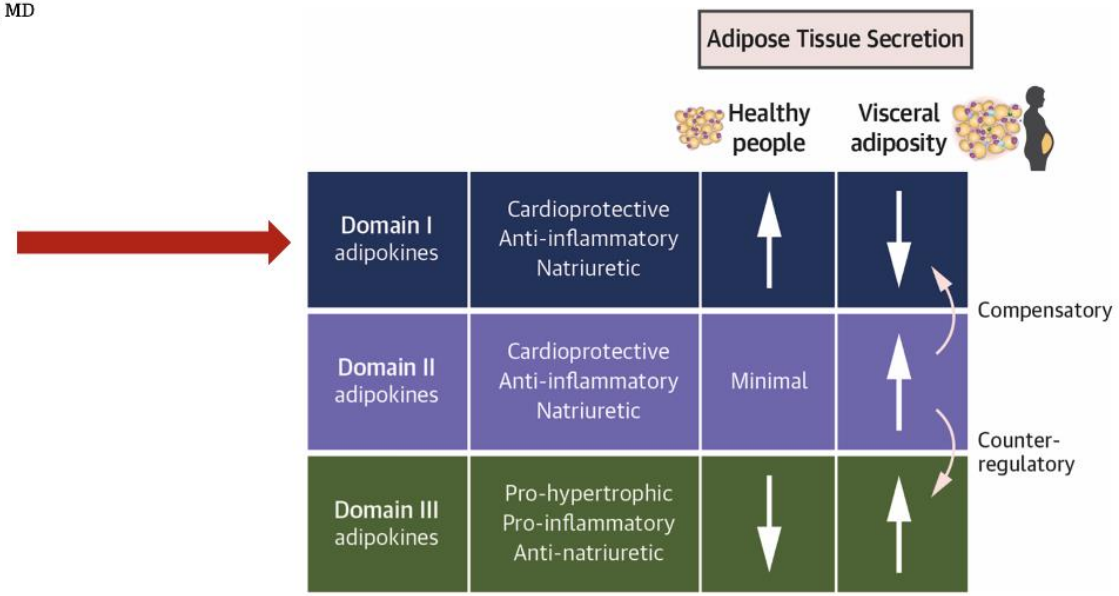
JACC STATE-OF-THE-ART REVIEW

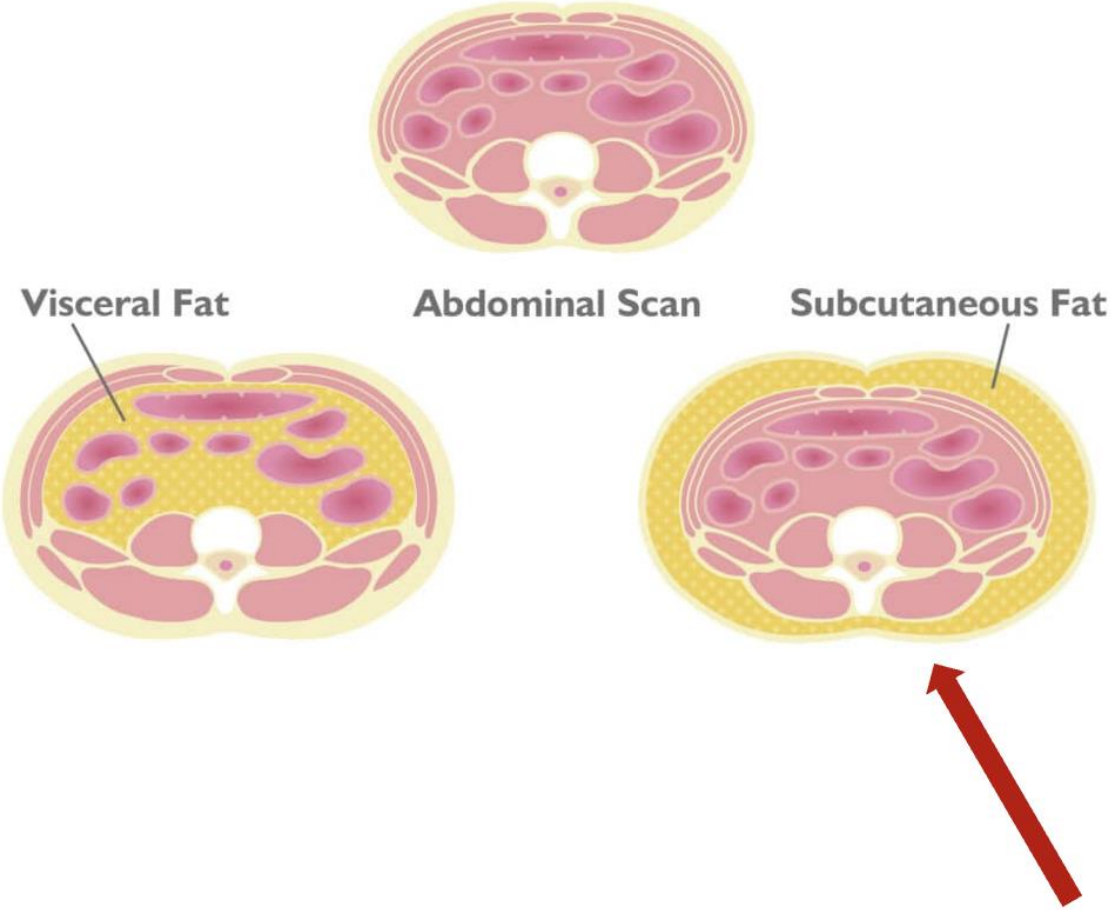
The Adipokine Hypothesis of Heart Failure With a Preserved Ejection Fraction

A Novel Framework to Explain Pathogenesis and Guide Treatment

Milton Packer, MD

FIGURE 3 Characterization of Adipokine Domains





Conclusioni

- Ultimo ricovero in Cardiologica a Luglio con conclusione di **Sindrome ad Alta Portarta Cardiaca → trattare la causa: l'obesità?**
- **Sospesi anti-ipertensivi** e mantenuta Ivabradina
- Attualmente **in corso Tirzepatide** con ulteriore progressivo calo ponderale

Missing Points

- Paziente con **OSAS** → mancato intervento nutrizionale in prima linea
- **Referral MMG** → misinterpretazione sintomatologica e scorretto referral specialistico
- **Gestione Cardiologica** inizialmente **scorretta** e successivamente incompleta

↓

Ritardo diagnostico-terapeutico per mancata presa in carico

https://doi.org/10.1038/s41591-025-03765-w

Framework for the pharmacological treatment of obesity and its complications from the European Association for the Study of Obesity (EASO)

Barbara McGowan, Andreea Ciudin, Jennifer L. Baker, Luca Busetto, Dror Dicker, Gema Frühbeck, Gijs H. Goossens, Matteo Monami, Paolo Sbraccia, Borja Martinez-Tellez, Euan Woodward & Volkan Yumuk