Clinical Case

Female , 62 years

January 2016

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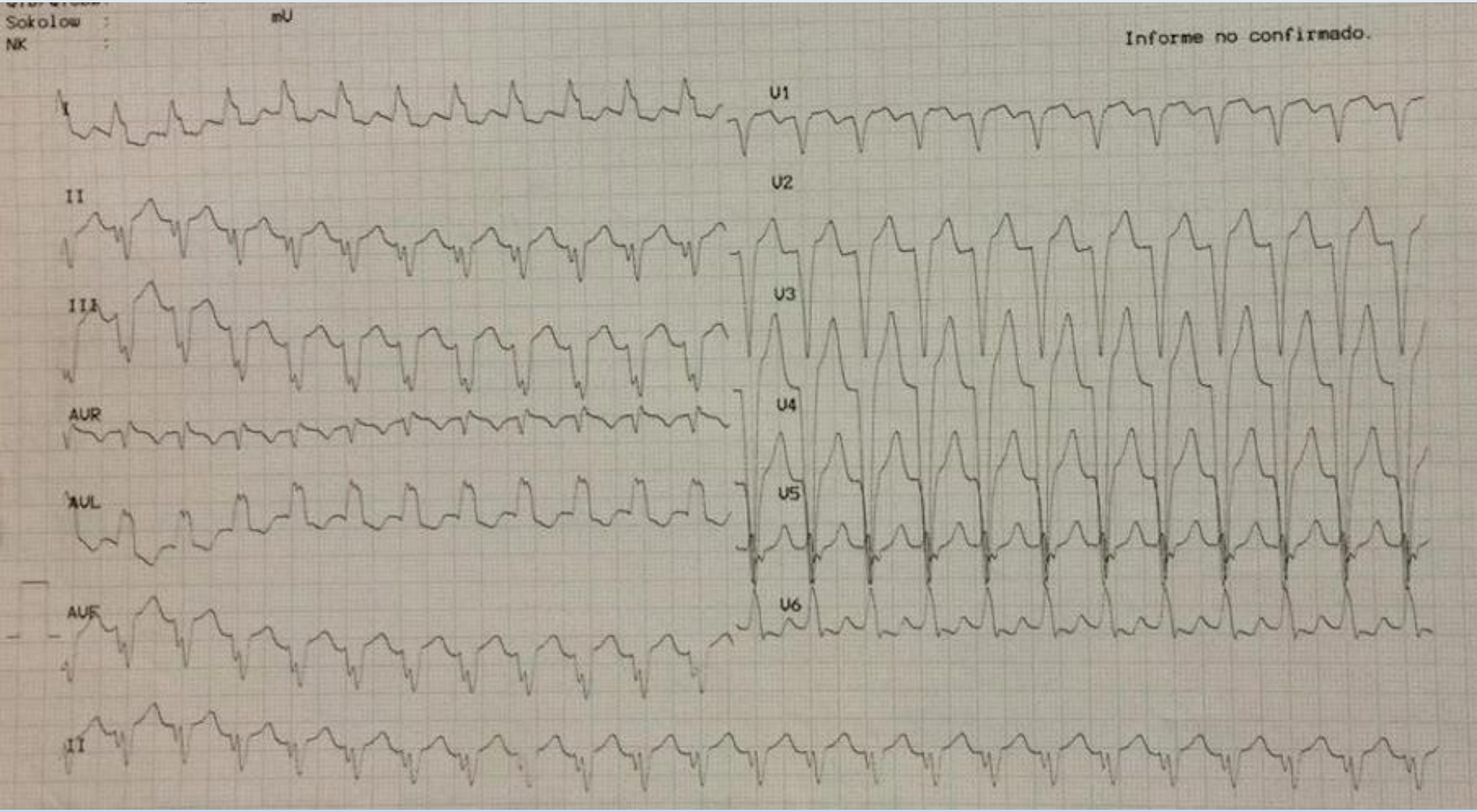
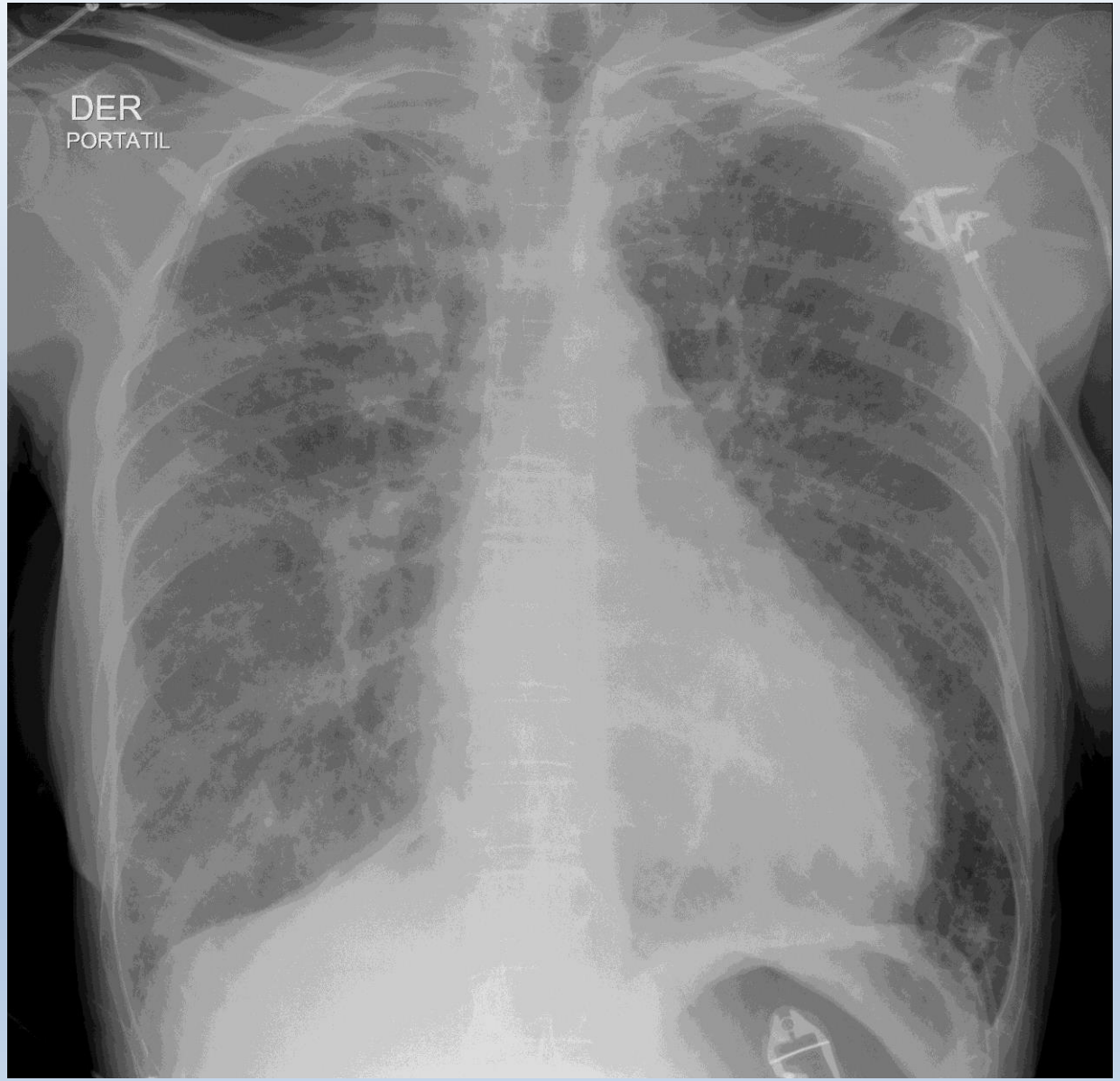
Clinical Hx

- Background:
  - Ostheoartritis and a depresive disorder
  - No medications
  - No other relevant medical hx
- January 2016:
  - Comes into the ER with a 24 hour hx of palpitations and acute dyspnea
  - On physical exam the patient looks pale, polypneic, cold, sweating, BP 100/60, HR 150 bpm reg, yug (+), gallop sounds and pulmonary congestion.

Admission ECG



Chest X Rays



Laboratory tests

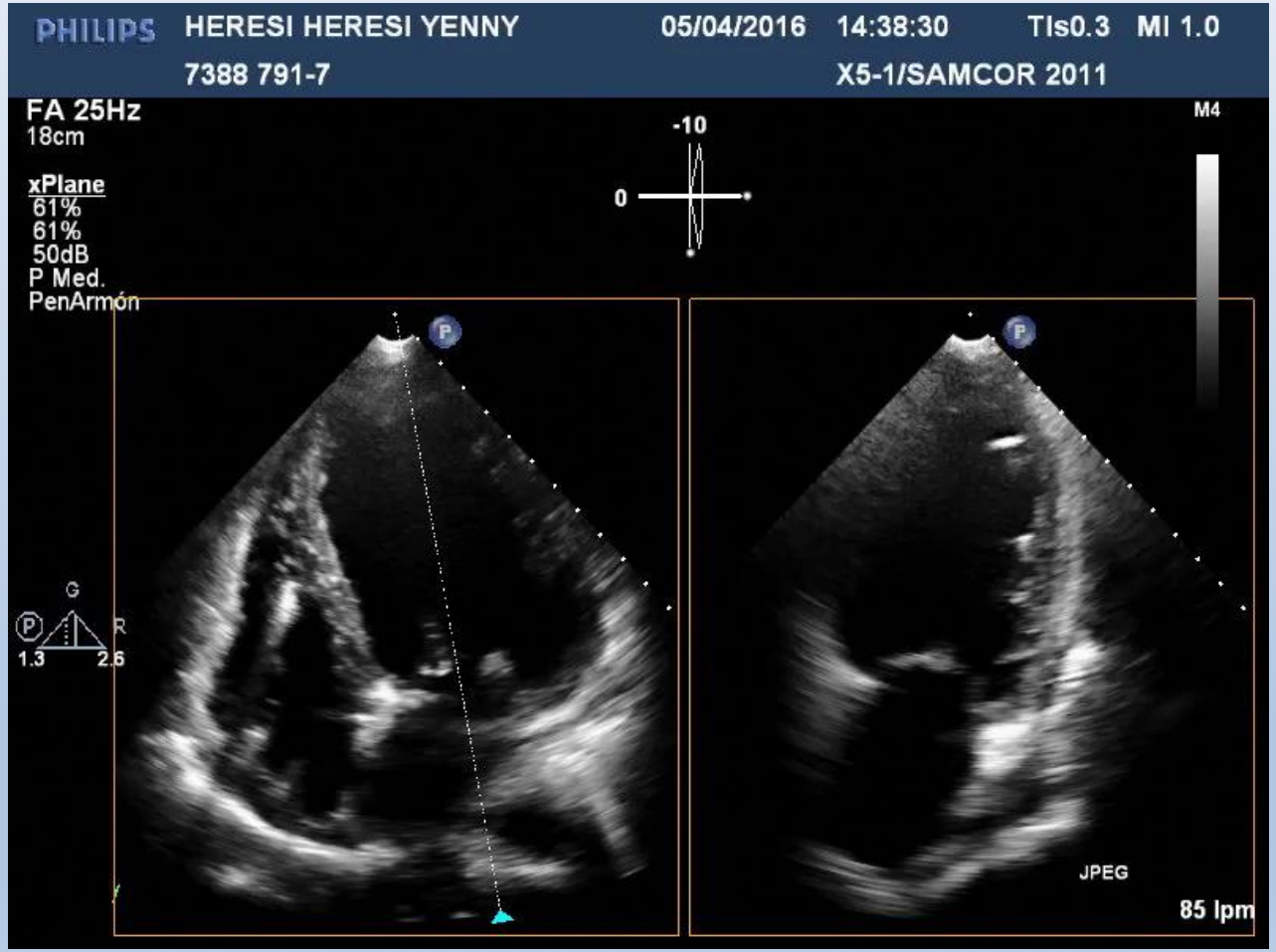
Parameter	
Hemoglobin/Hct	14,3 x10*3
Leukocytes	12,2/36,6 %
Creatinine	0,53 mg/dl
Sodium/Potasium	128/4,4/93 mg/dl
BUN	17 mg/dl
HS Troponin	40,6 pg/ml (VN <14)
Lactic acid	1,9 mmol/L

Echocardiogram

Ao: 27 mm
LA: 55 mm
LV: 65/56 mm
PW/PS: 10/9 mm
EF 25%
RV: 44 mm.
TAPSE 17mm, Onda S: 10cm/s
Severe MR
DD type 3
PSAP 60mmHg
Moderate TI

Echocardiogram

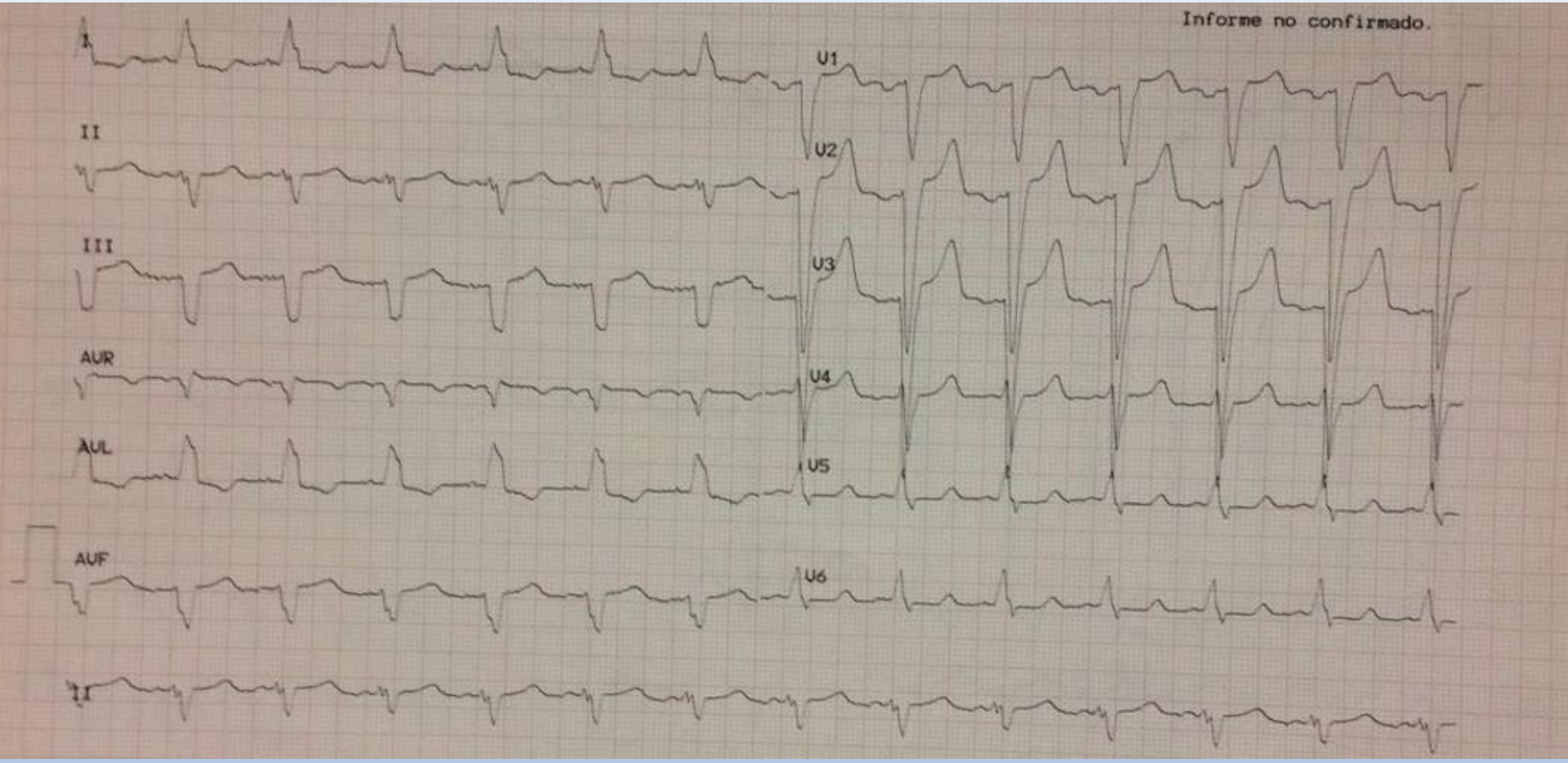
Echocardiogram



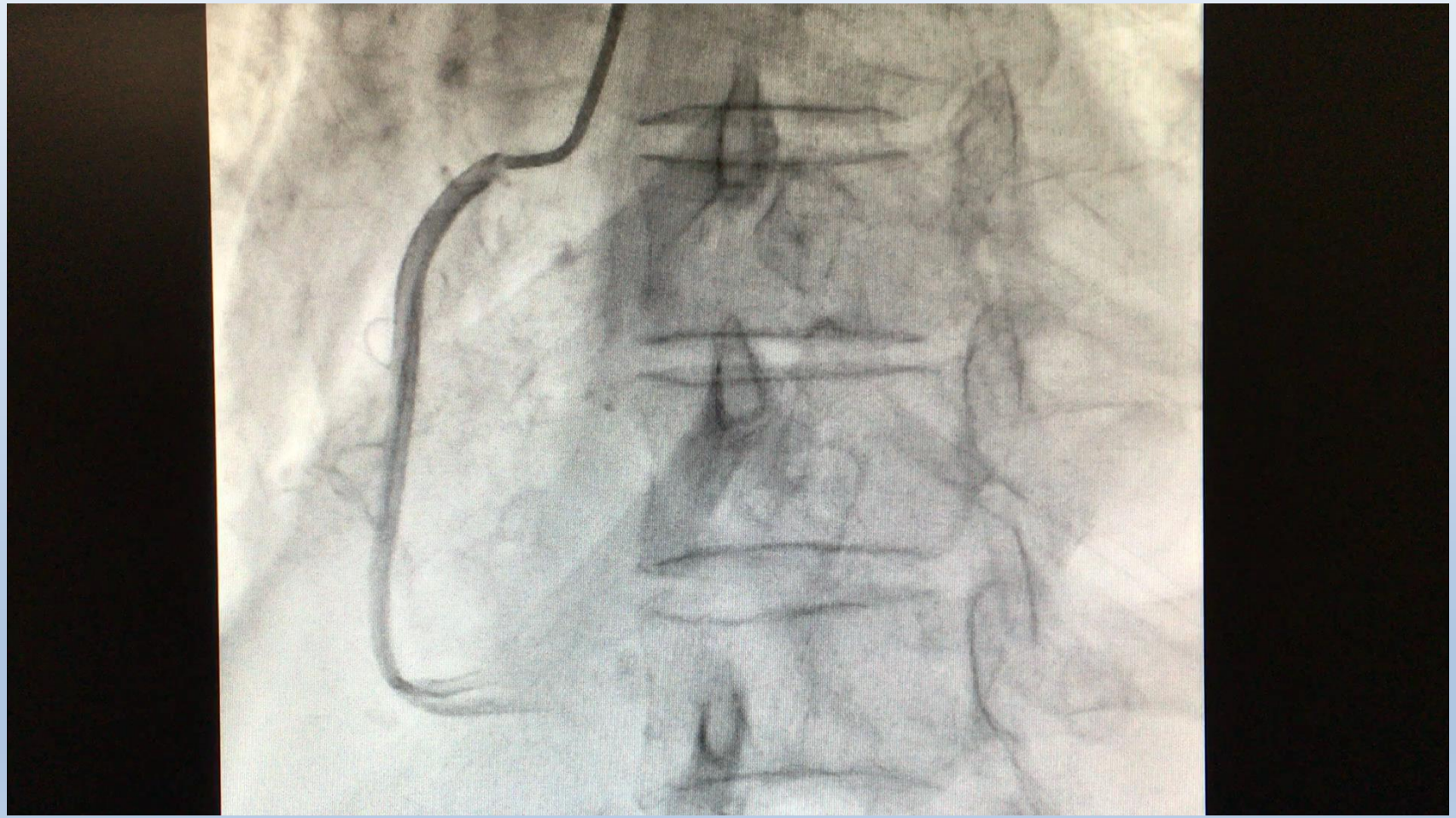
Clinical Course

- Unstable
  - Electrical CV and connection to MV were performed
  - Vasoactive Drugs: Noradrenaline, Dobutamine and Dopamine
- Extubation in the 5th day, when hemodynamically stable.
- Medications according to guidelines: ACEI, Furosemide, Spironolactone, Amiodarone iv, UF Heparin

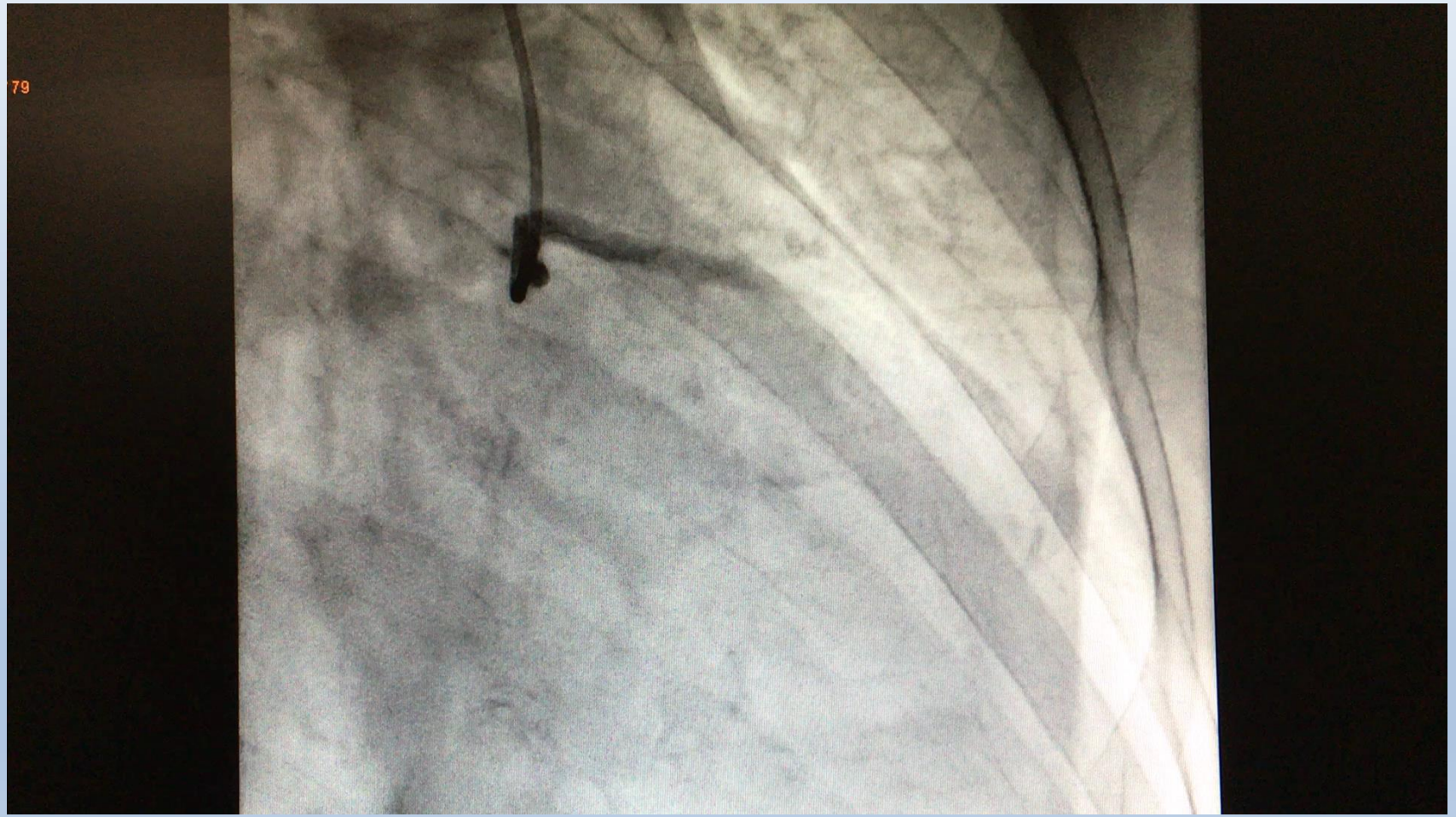
ECG



Coronary Angiogram



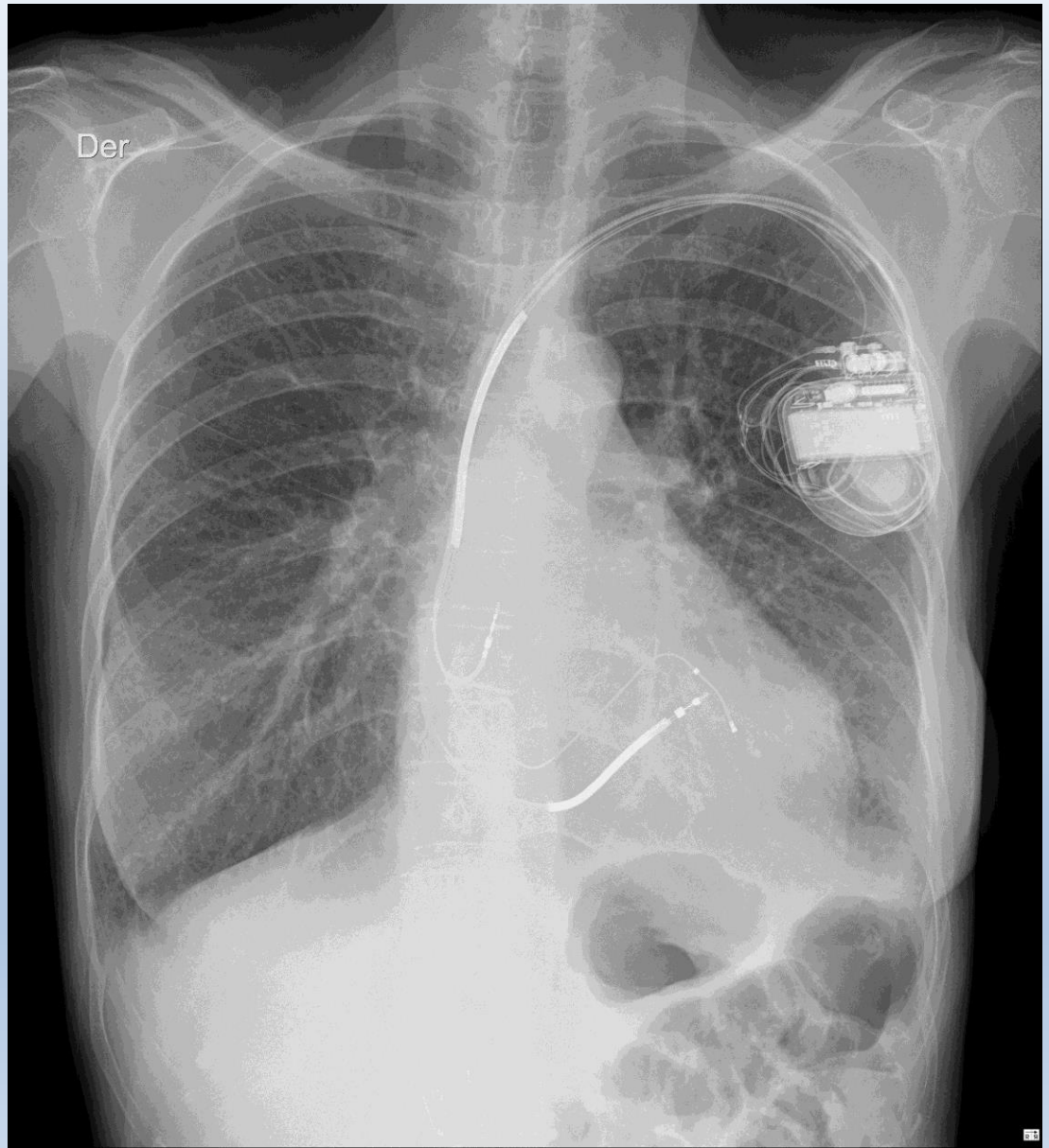
Coronary Angiogram



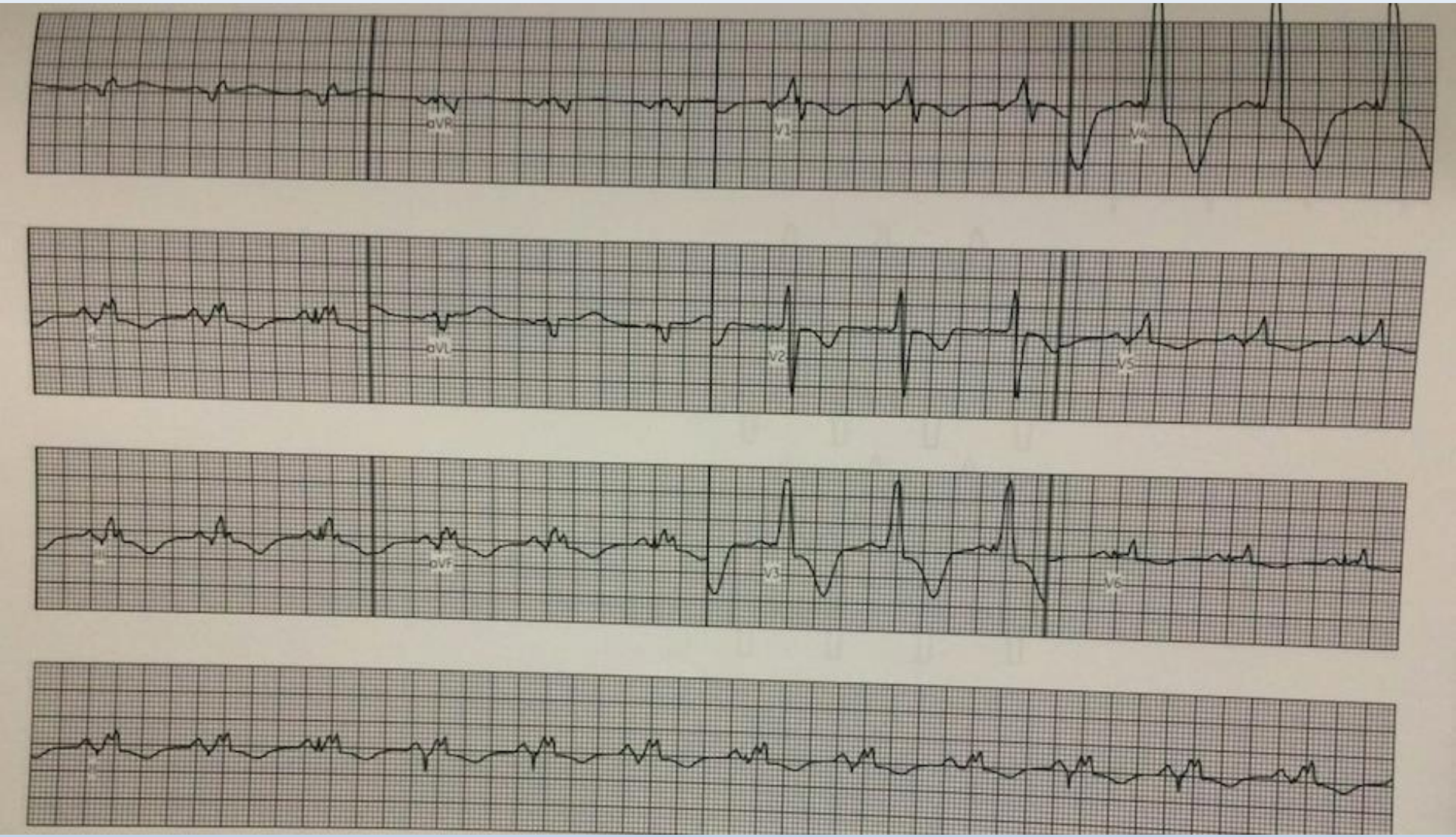
Your Recomendations:

1. Discharge and ambulatory control after prescribing maximal doses of evidence based medications
2. ICD implant and oral medications according to tolerance
3. ICD and CRT implant plus titration of oral medications according to clinical response
4. ICD and CRT, titration of oral medications up to tolerance and addition of low doses of sacubitril/valsartan prior to discharge

Chest X Rays prior to discharge



ECG post CRT-ICD



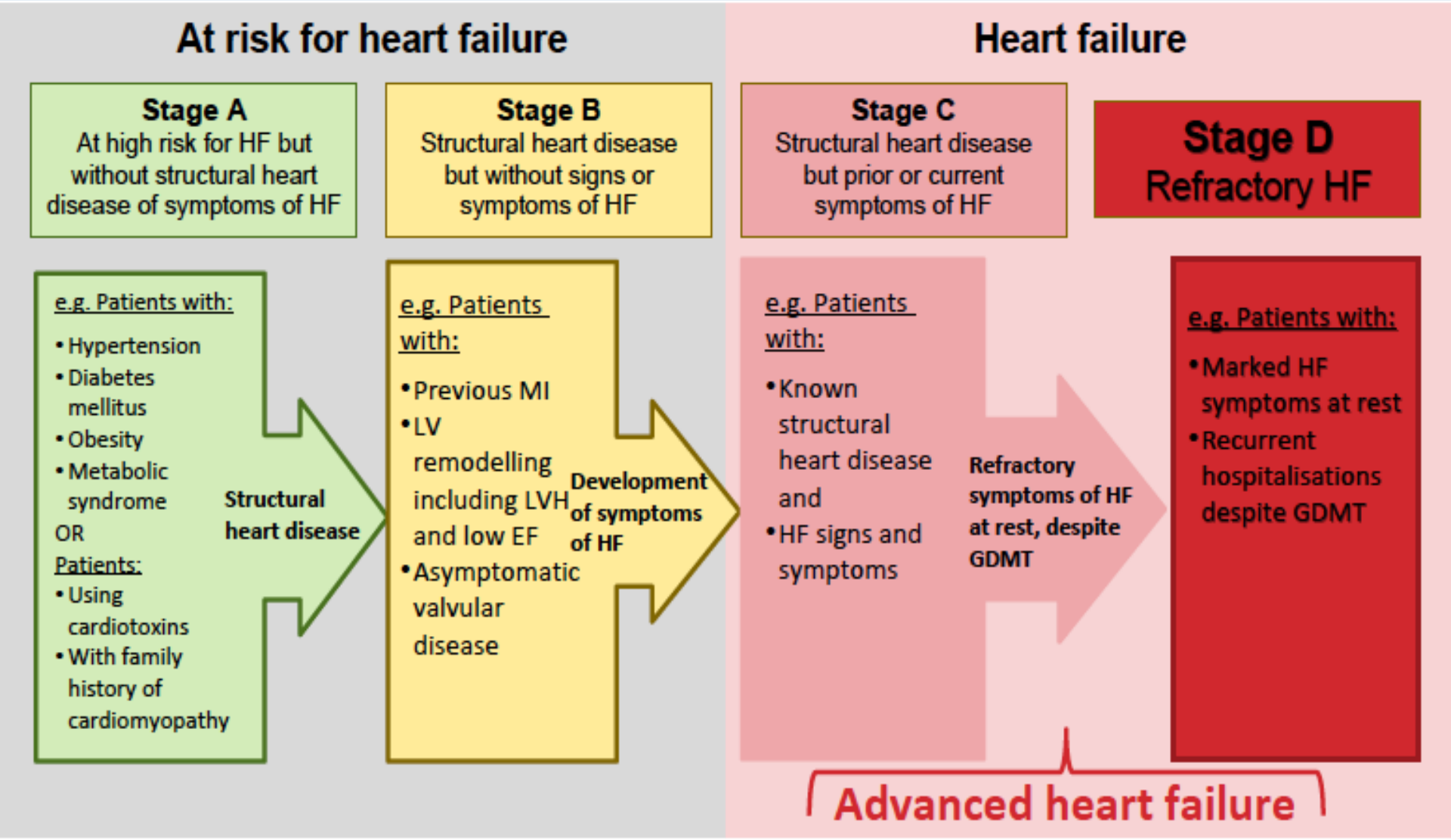
Follow up

- **Patient persists in NYHA FC III**
- **No changes in Echocardiogram performed at 3 months**
- **Actions taken :**
  - FE carboximaltosa infusion
  - CRT optimization under ECHO
  - Plans to incorporate the patient to a pre transplant list are rejected by the patient
- **Ambulatory controls:**
  - No signs of volume overload
  - BP 90/60, HR 70 bpm, reg, without evidence of arrythmias
  - Losartán 25mg qd , Carvedilol 3,125mg q 12 hrs vo, Espironolactona 25 mg qd, Amiodarona 200 mg qd, Furosemida 20mg qd, omeprazol 20mg qd, Rivaroxaban 15mg qd, Clonazepam 1mg at night time, Venlafaxine 150mg qd.

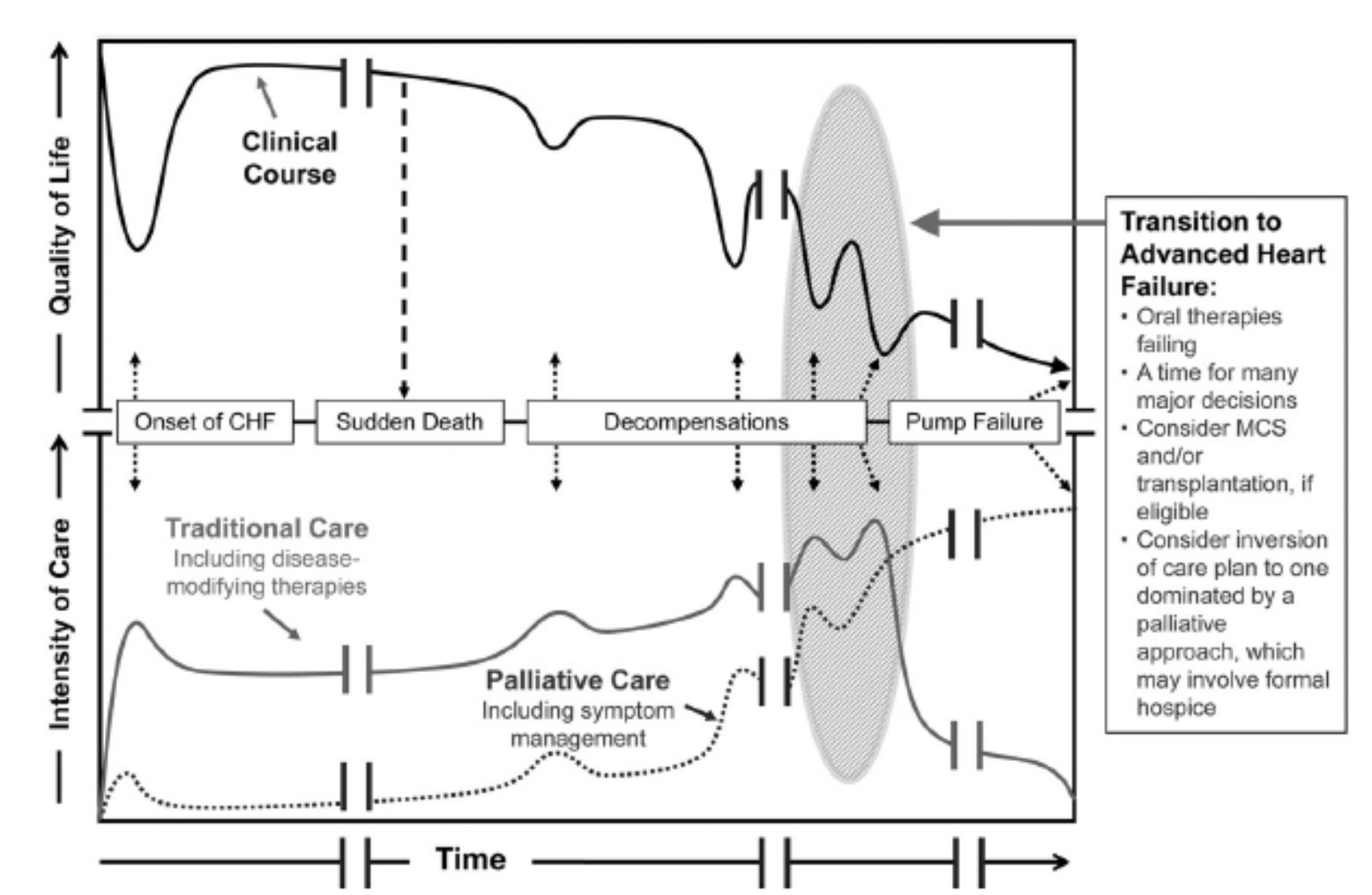
Treatment to follow:

- 1.-Change Losartan to Sacubitril/Valsartan 50mg q12 hrs
- 2.-Increase the dose of Furosemide to 40mg qd
- 3.-Progressive increase of Carvedilol to 6.25 bid ad thereafter to 12.5 mg bid
- 4.-Stop Spironolactone to prevent renal dysfunction
- 5.- Keep medications as prescribed

Clinical Course of Heart Failure



Transition to Advanced Heart Failure

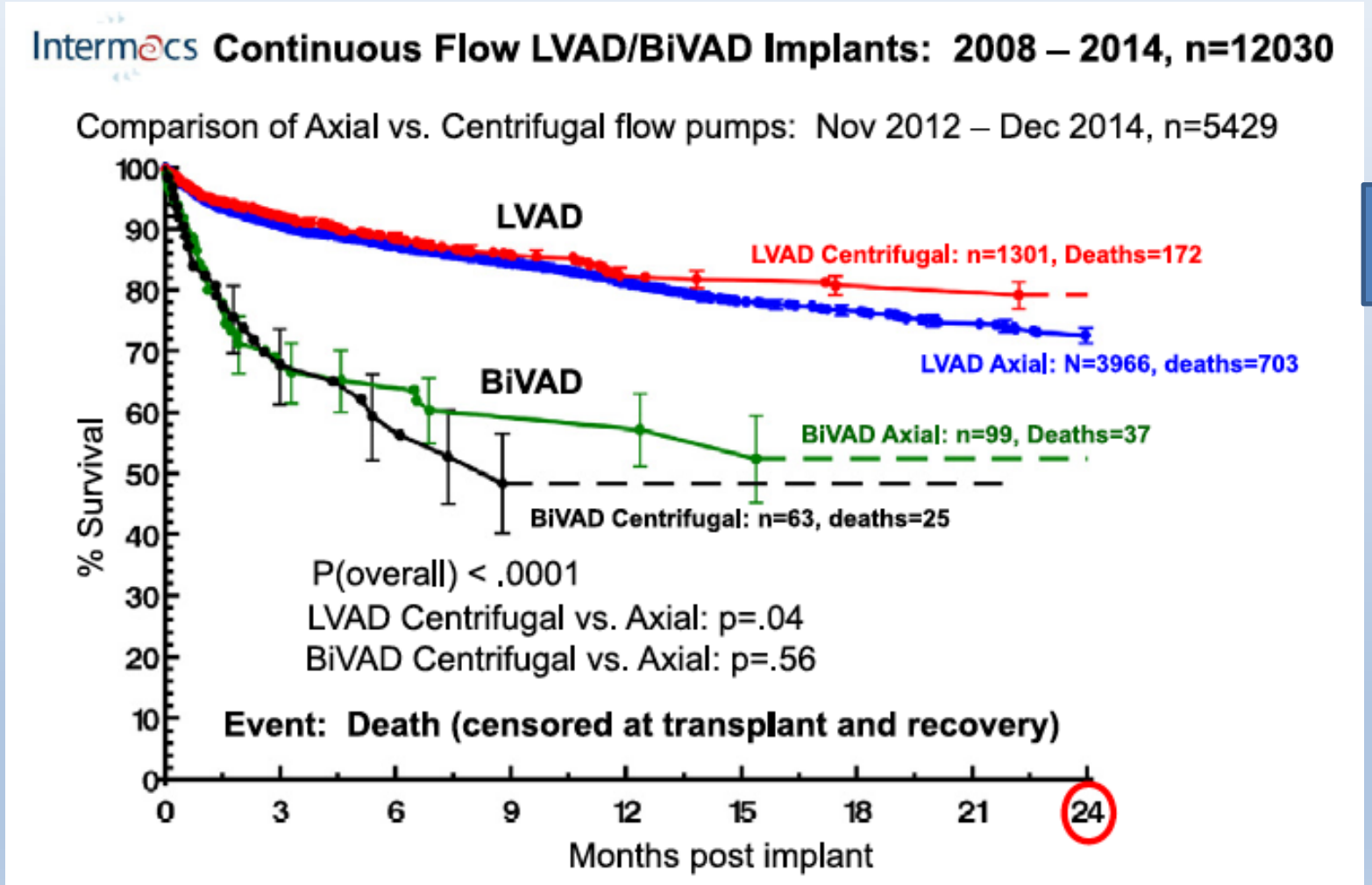


Allen et al. Circulation 2012;125:1928

Optimize Medical Therapy

- Dose titration of different drugs and consider interaction: Diuretics, betablockers, vasodilators, anticoagulants, etc
- Consider that drug intolerance or adverse response could be a marker of circulatory failure
- Consider new therapies available
- Consider alternative therapies in case of refractoriness: Support devices, intermitent inotrope infusions, bridge to transplant, others

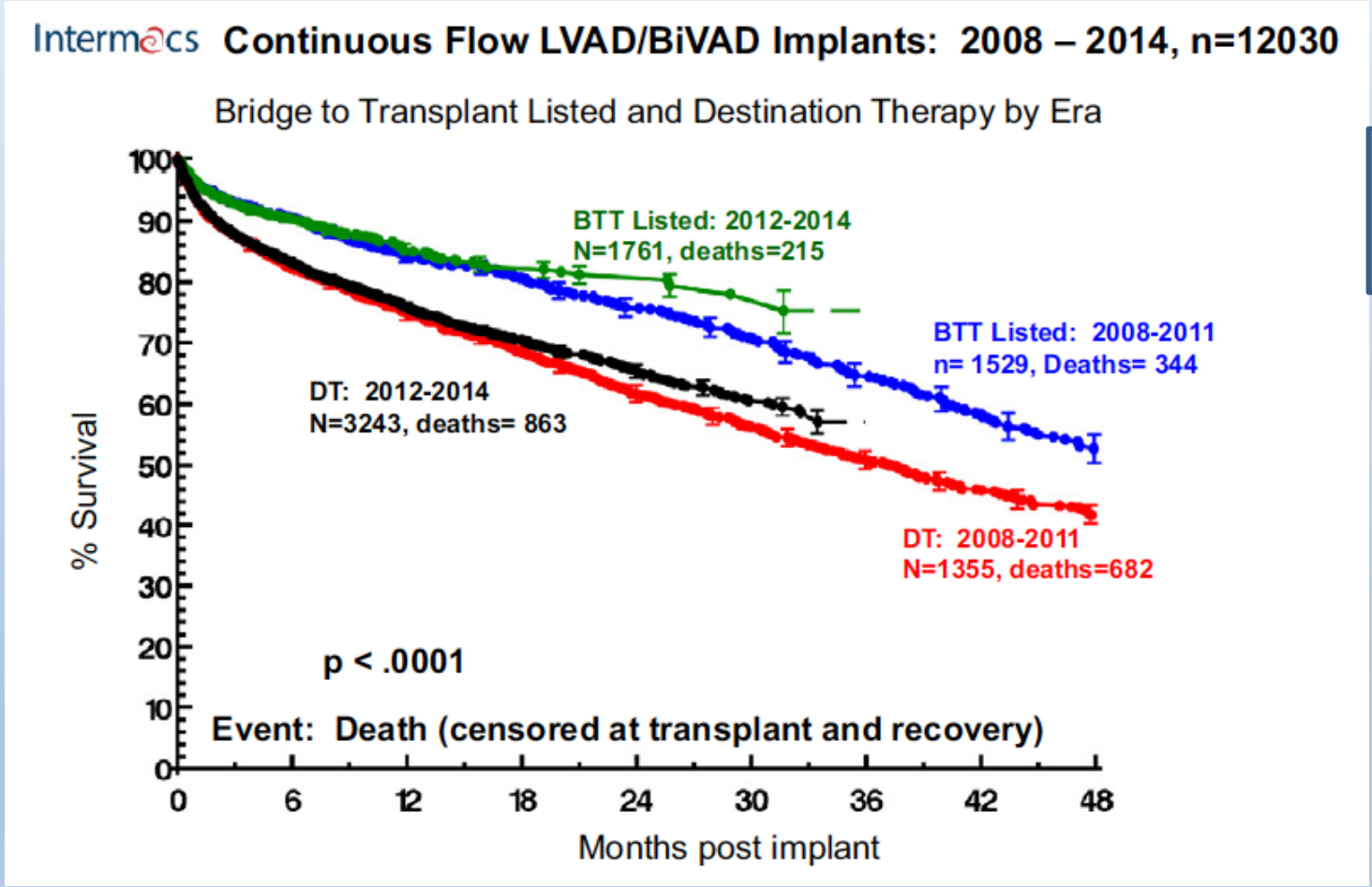
Survival With LVAD Devices



80% 1yr
70% 2yr

7th INTERMACS, 2015

Survival With LVAD Devices according to implantation strategies



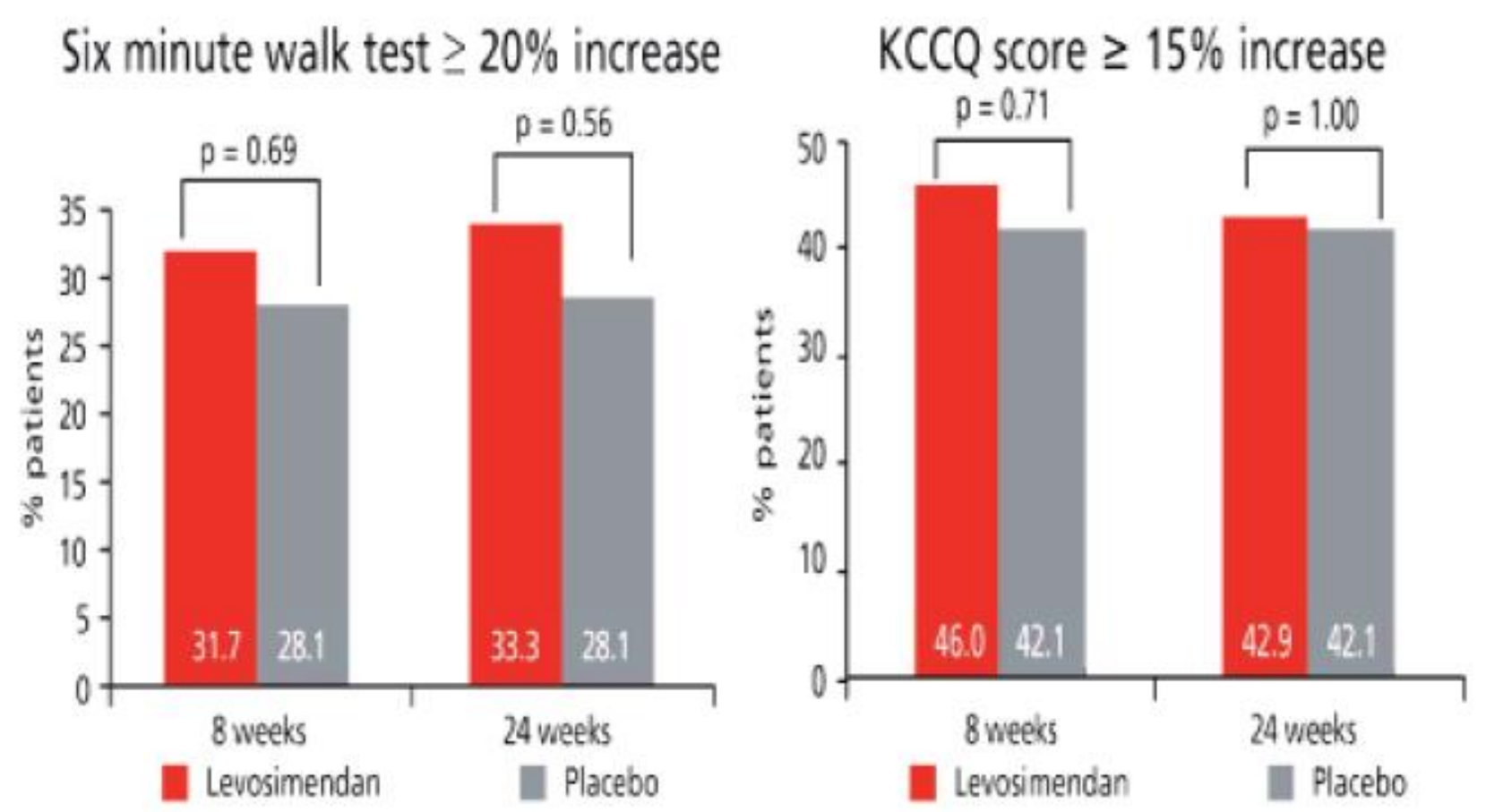
DT:
1 año: 76%
3 años: 57%

Intermitent Infusions of Inotropes

(Dobutamine, Milrinone, Levosimendam, Dopamine):

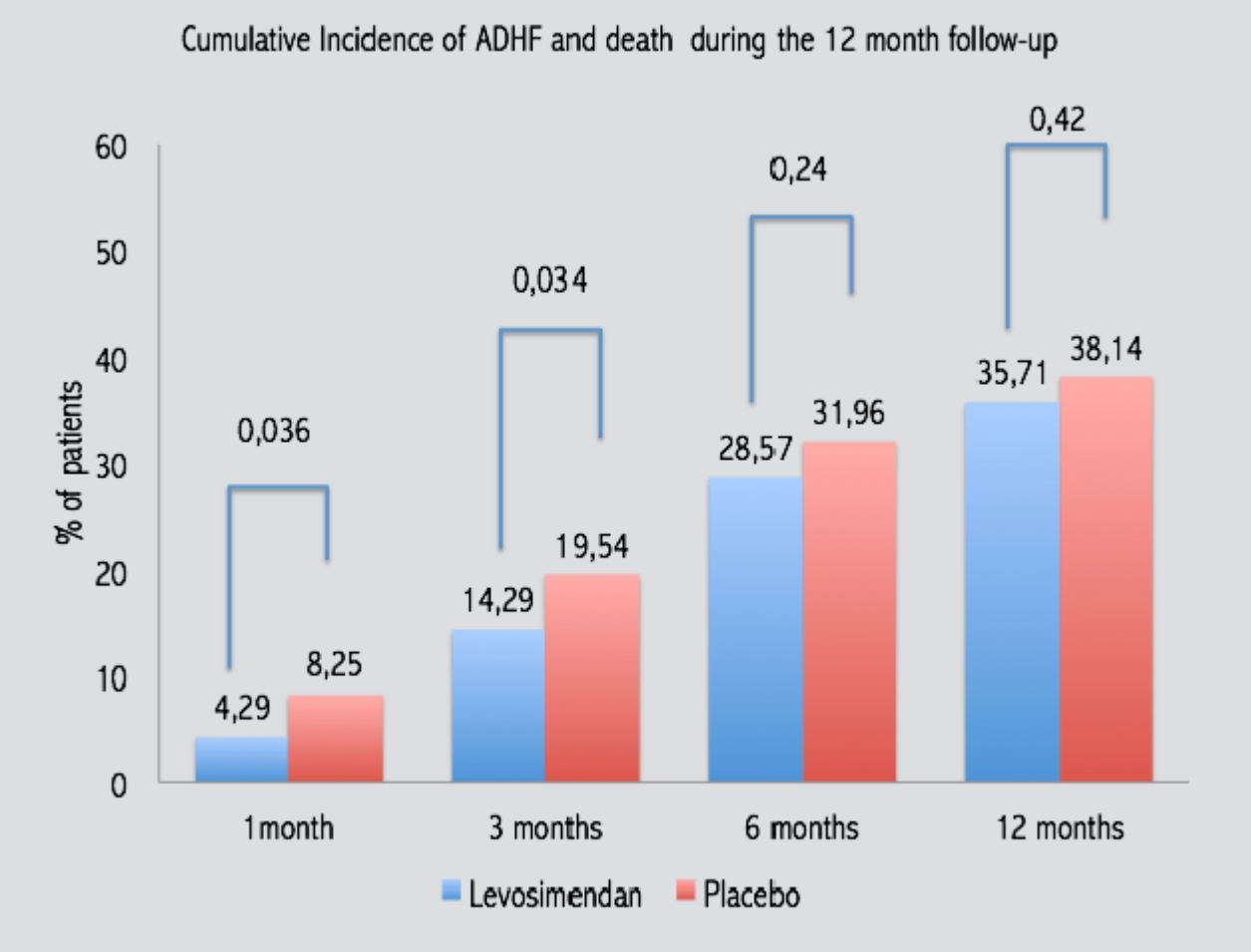
Temporary increase in cardiac output and diuresis
Prevent hyonatremia
Improve quality of life
Do not prolong survival

Efficacy and safety of the pulse infusions of levosimendan in outpatients with advanced heart failure (LevoRep) study: a multicentre randomized trial



Eur J Heart Fail 2014;126:898

LAICA Study



HFA-ESC Congress 2016

Advanced Chronic Heart Failure

1. Moderate to severe symptoms of dyspnea and/or fatigue at rest or with minimal exertion (NYHA functional class III or IV)
2. Episodes of fluid retention and/or reduced cardiac output
3. Objective evidence of severe cardiac dysfunction demonstrated by at least 1 of the following:

   Left ventricular ejection fraction <30%

   Pseudonormal or restrictive mitral inflow pattern by Doppler

   High left and/or right ventricular filling pressures, or

   Elevated B-type natriuretic peptide
4. Severe impairment of functional capacity as demonstrated by either inability to exercise, 6-min walk distance <300 m, or peak oxygen uptake <12 to 14 $mL \cdot g^{-1} \cdot min^{-1}$
5. History of at least 1 hospitalization in the past 6 mo
6. Characteristics should be present despite optimal medical therapy

NYHA indicates New York Heart Association.

Circulation 2012; 125:1928