



# Weill Cornell Medicine

Hospital Medicine Point of Care Ultrasound  
(HM POCUS) Program

# POCUS Case Conference

# Case 1

**CC:** 85 yo man w/ SOB & Cough and choking while eating

**HPI:** OSA, A Fib, CVA and recurrent aspirations

**Exam:**

- BP 122/86
- P 110
- RR 24
- Sat=88% on RA, 94% on 2L

# Exam

- JVP 8-10cm, +HJR;
- Lungs w/ b/l crackles;
- Irregular HR, II/VI systolic murmur
- No LE edema

# Labs

- Cr=0.8
- WBC=10
- BNP=521
- procalcitonin 0.3



**Official CXR read:**

New R basilar consolidation and small R pleural effusion  
Unchanged left basilar atelectasis or consolidation  
Implantable loop recorder

# Case 1

**Admission diagnosis:** Recurrent aspiration PNA

**Tx:** IVF and antibiotics

POCUS

# Anterior Chest Wall (mid-clavicular line)

01/14/19 11:40:09AM ADM

GE  
L<sub>o</sub>

3Sc Abdomen MI 1.2 TIs 0.2

U

RIGHT



01/14/19 11:43:43AM ADM

GE  
L<sub>o</sub>

3Sc Abdomen MI 1.2 TIs 0.2

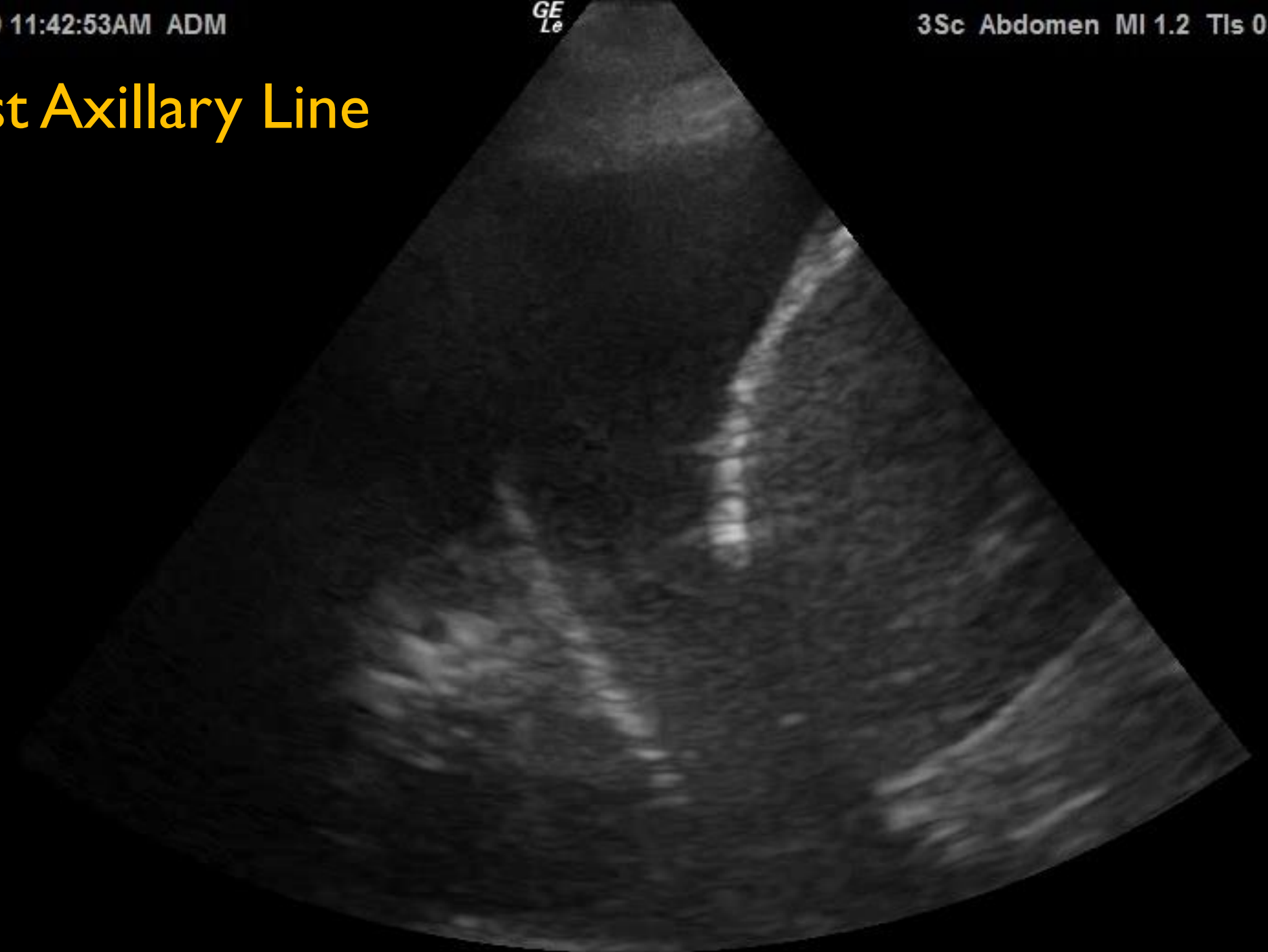
U

LEFT





# Right Post Axillary Line (Supine)



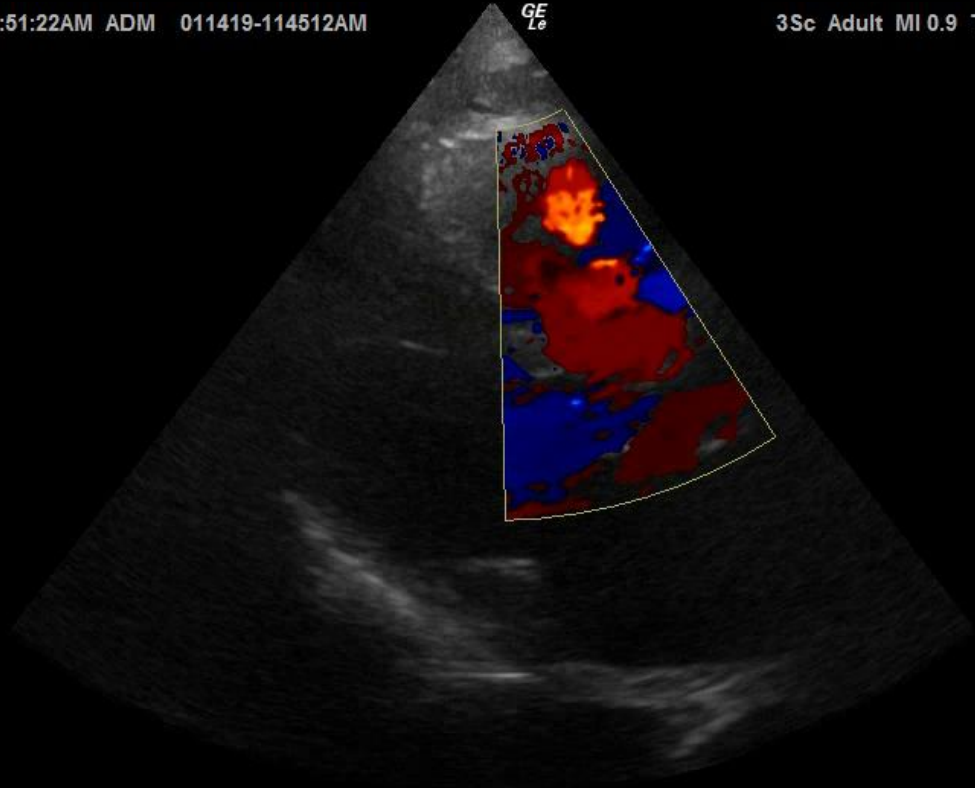
# Left Post Axillary Line (Supine)



01/14/19 11:51:22AM ADM 011419-114512AM

GE  
L<sub>e</sub>

3Sc Adult MI 0.9 TIs 0.6





10-

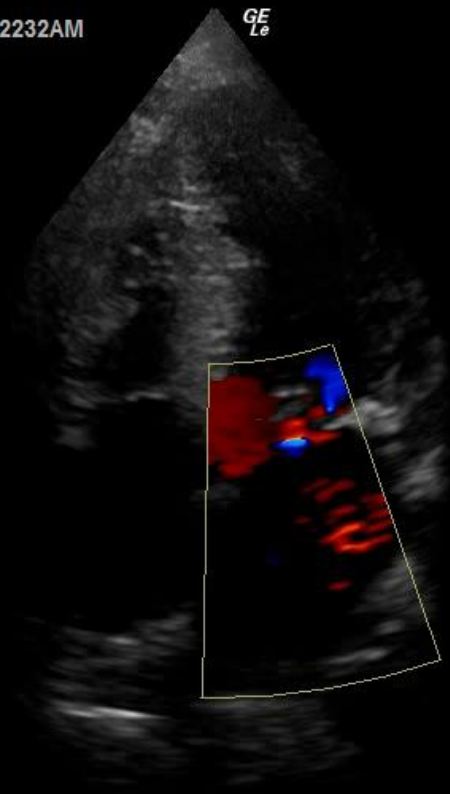
20-



01/15/19 11:28:27AM ADM 011519-112232AM

GE  
L<sub>e</sub>

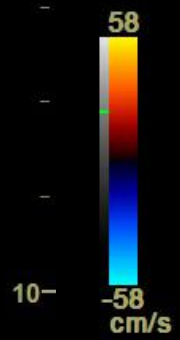
3Sc Adult MI 1.2 TIs 0.1



01/15/19 11:28:38AM ADM 011519-112232AM

GE  
L<sub>e</sub>

3Sc Adult MI 1.0 TIs 0.6



01/14/19 12:04:39PM ADM 011419-114512AM

GE

3Sc Adult MI 1.2 TIs 0.2

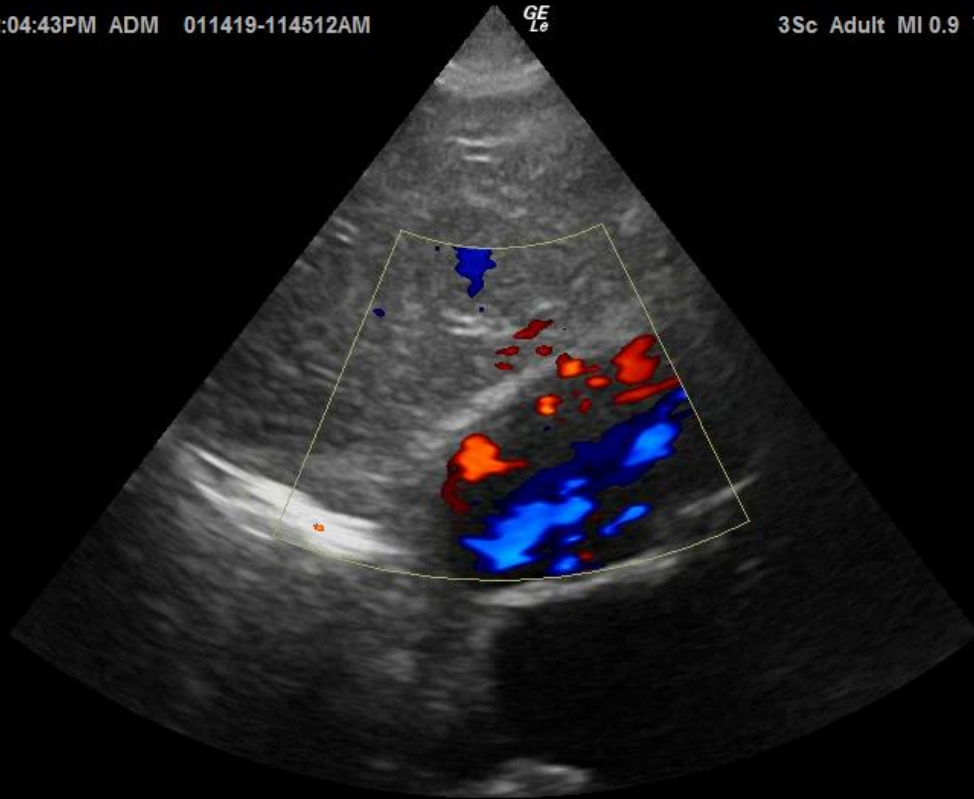
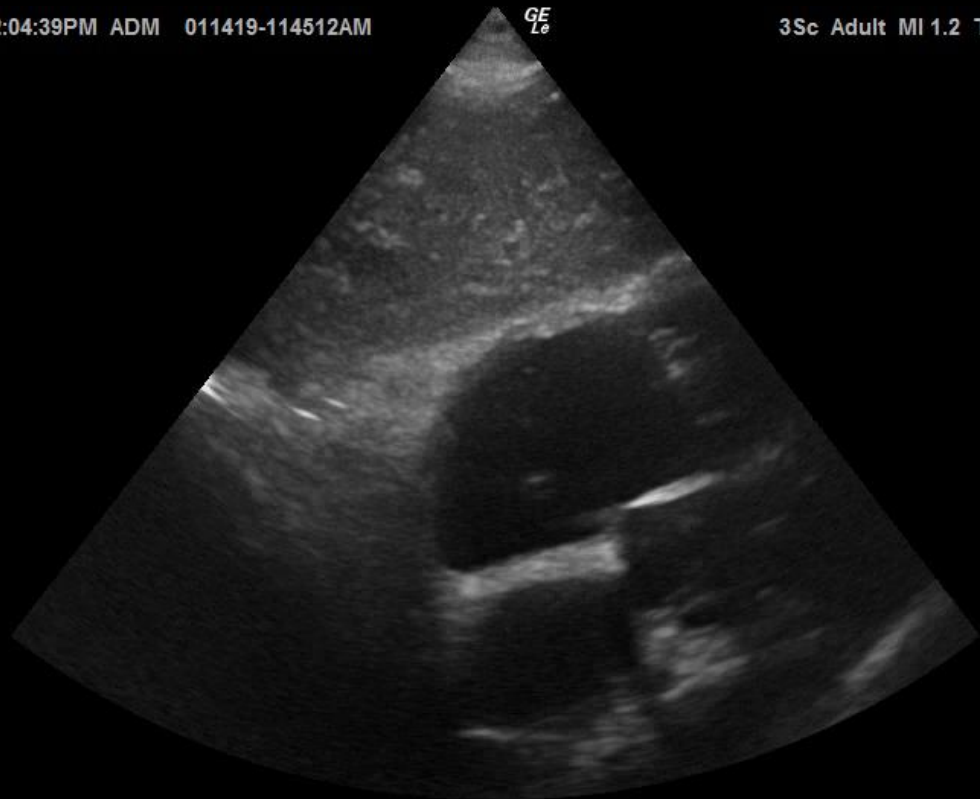
U-

01/14/19 12:04:43PM ADM 011419-114512AM

GE

3Sc Adult MI 0.9 TIs 0.6

U-



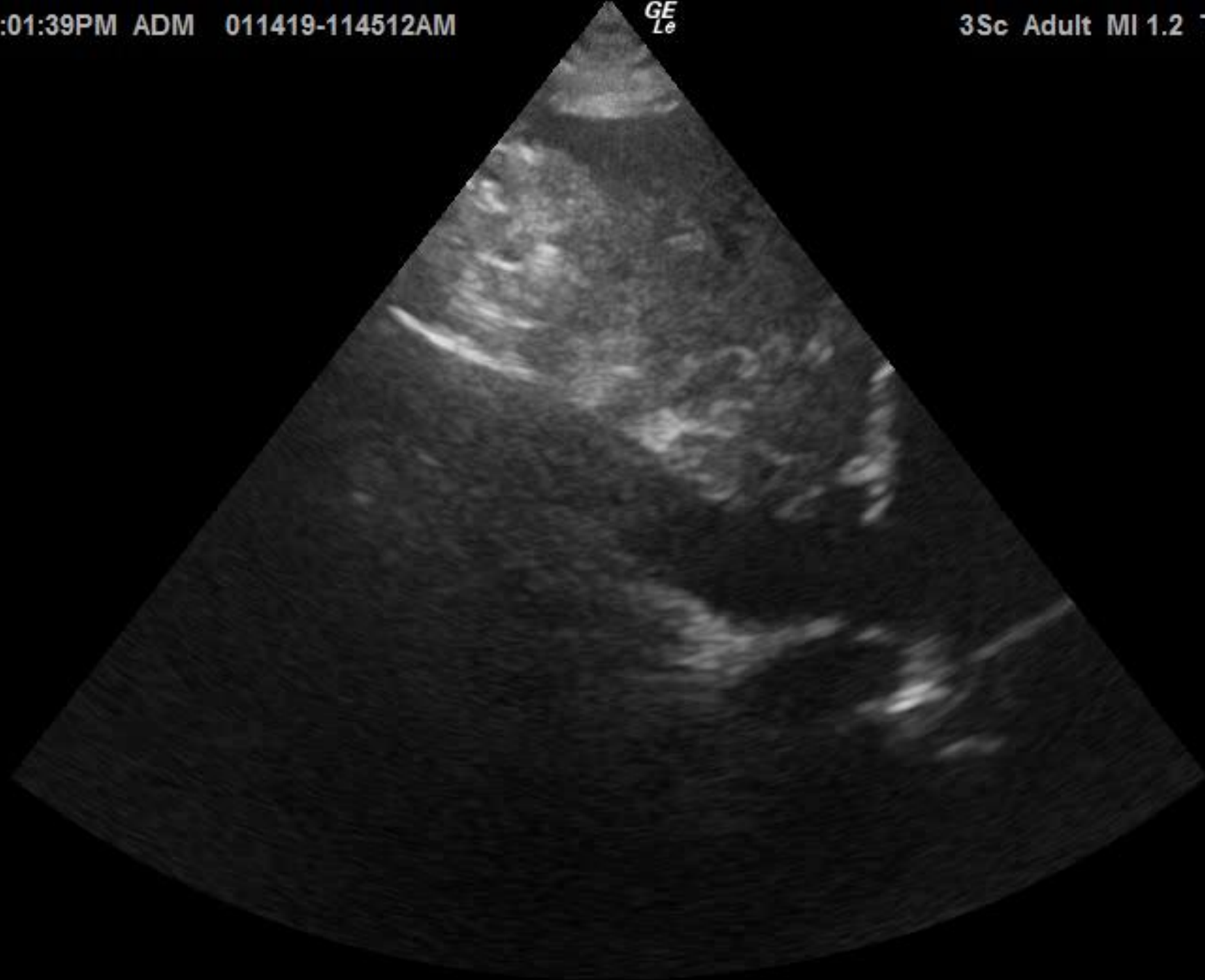
5  
10  
15

5  
10  
15

01/14/19 12:01:39PM ADM 011419-114512AM

GE  
Le

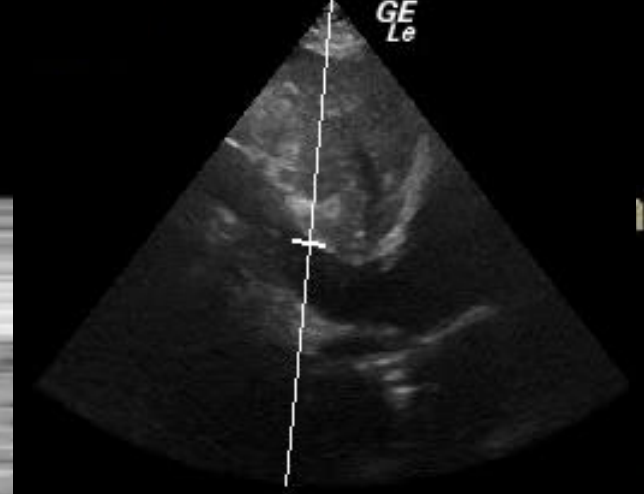
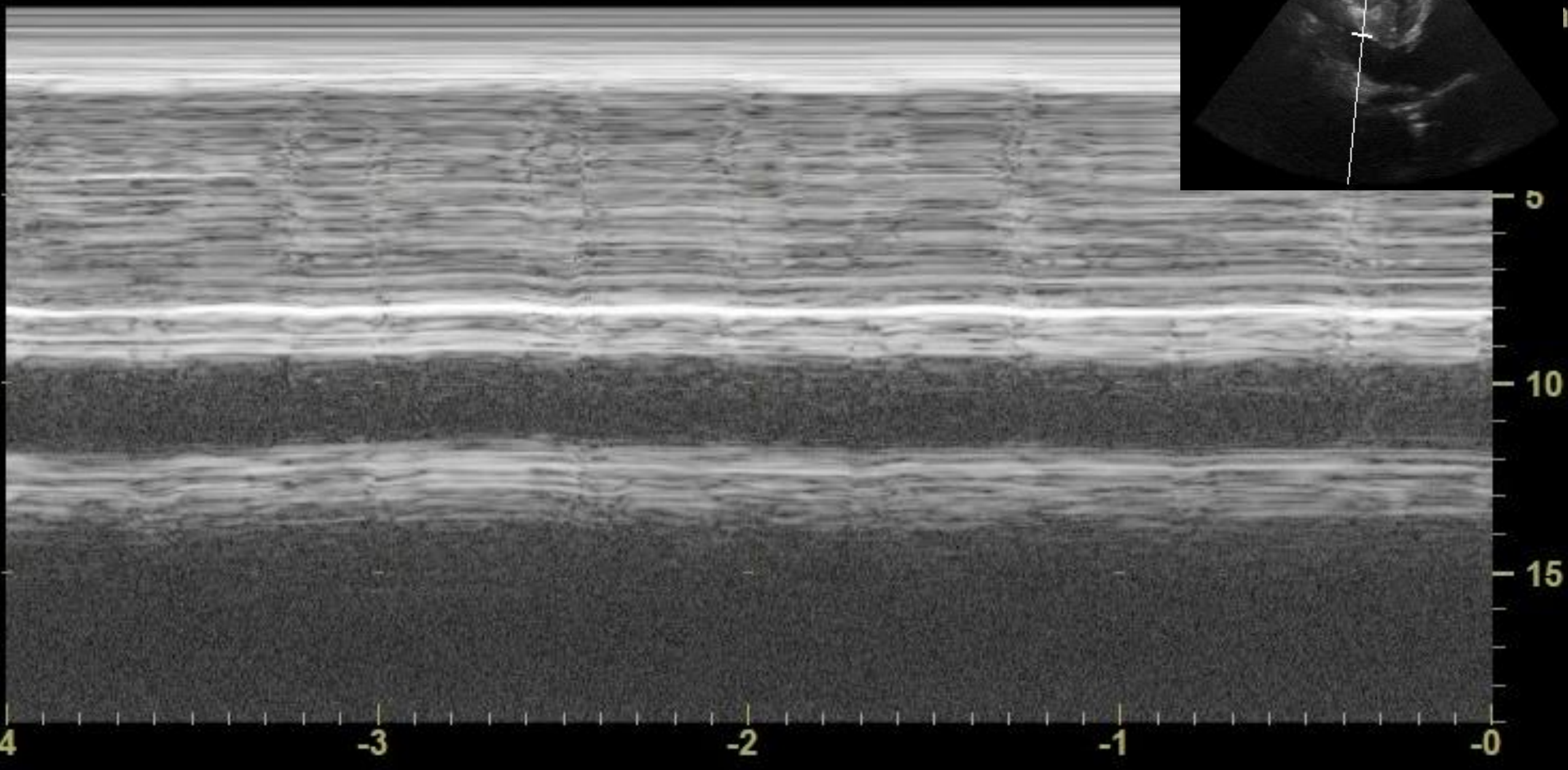
3Sc Adult MI 1.2 TIs 0.2



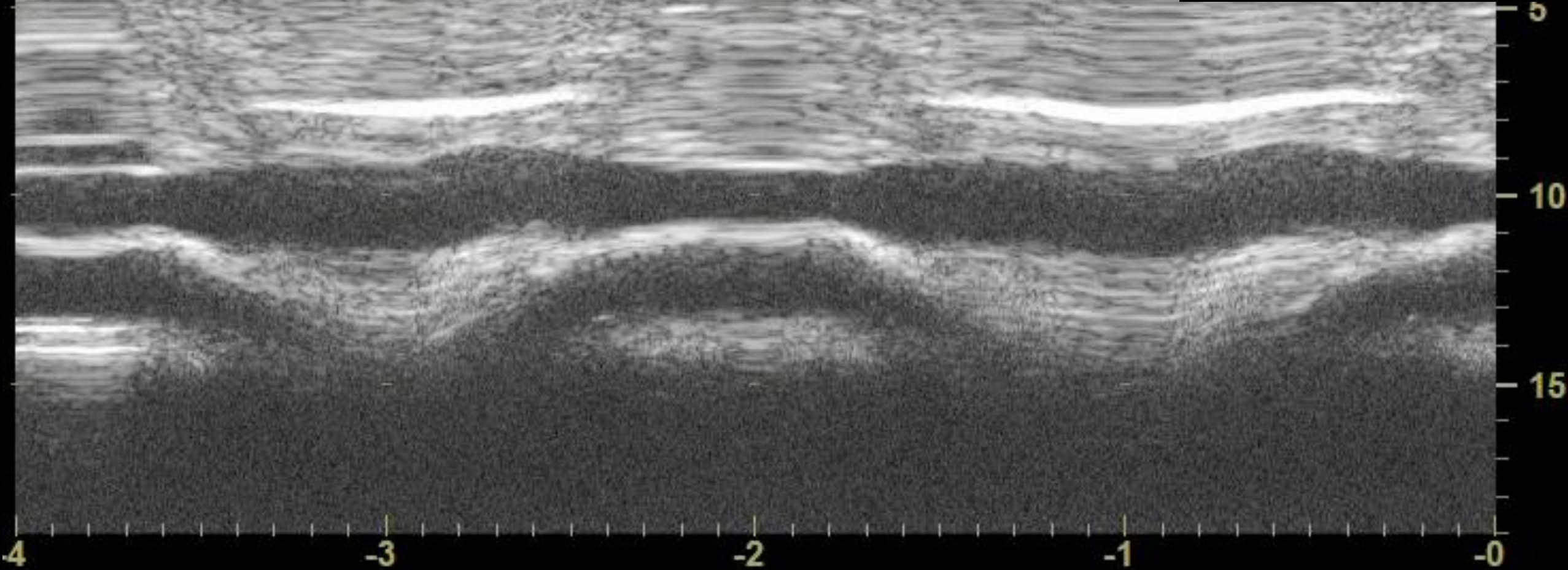
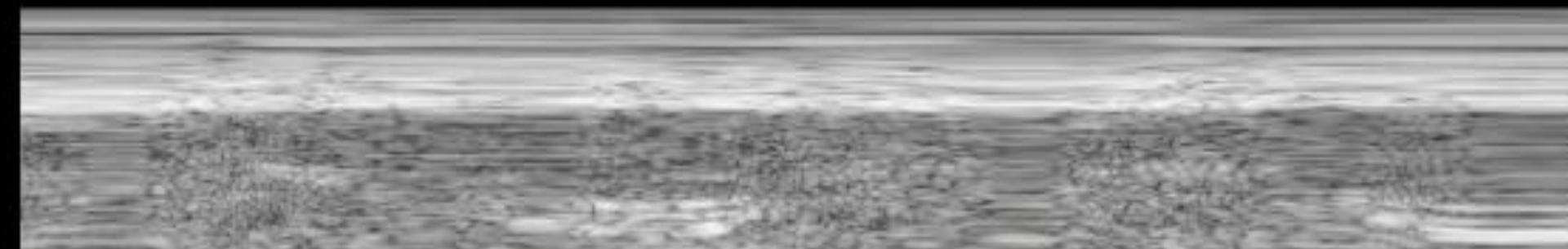
5

10

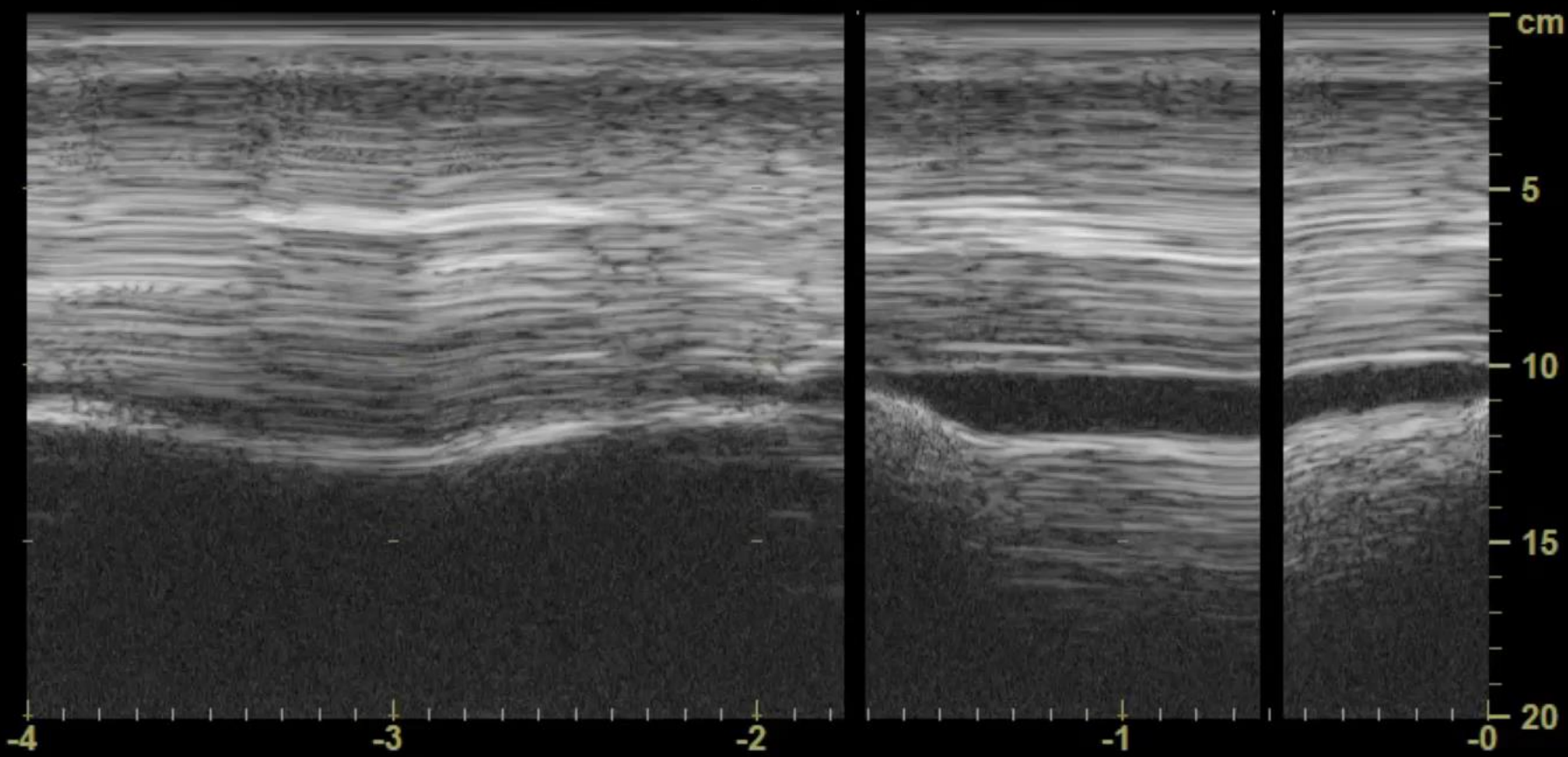
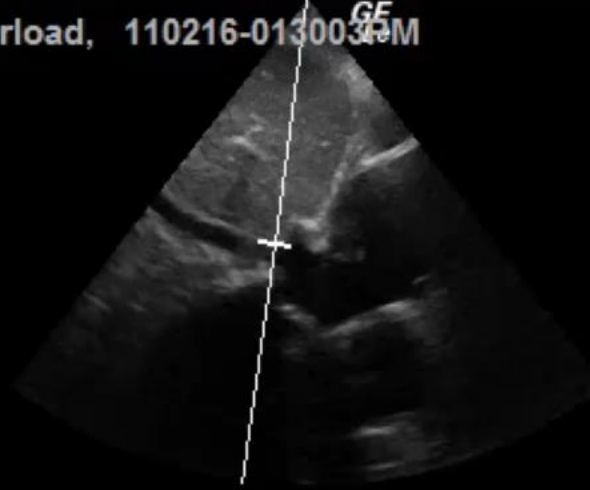
15







# Case 2



0-  
10-  
20-

cm

5

10

15

20

# Breathing in CHF

- Cheyne-Stokes respiration (CSR): a form of disordered breathing
- Can be associated with sleep or occur during wakefulness
- CSR is seen in up to 40% of HFrEF pts
- Directly related to LV “badness” and is a *risk factor* for mortality
- Likely a *marker*, not a cause of excess mortality

*The* NEW ENGLAND  
JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

SEPTEMBER 17, 2015

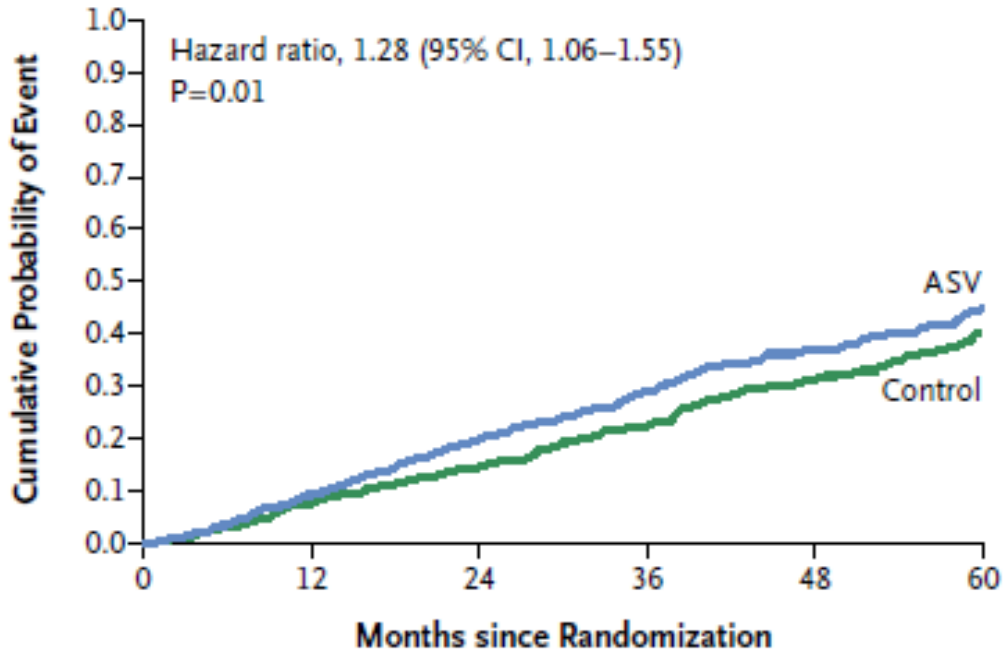
VOL. 373 NO. 12

Adaptive Servo-Ventilation for Central Sleep Apnea in Systolic  
Heart Failure

Martin R. Cowie, M.D., Holger Woehrle, M.D., Karl Wegscheider, Ph.D., Christiane Angermann, M.D.,  
Marie-Pia d'Ortho, M.D., Ph.D., Erland Erdmann, M.D., Patrick Levy, M.D., Ph.D., Anita K. Simonds, M.D.,  
Virend K. Somers, M.D., Ph.D., Faiez Zannad, M.D., Ph.D., and Helmut Teschler, M.D.

1,325 pts with LV EF  $\leq$  45% and central apnea (apnea–hypopnea index (AHI)  $\geq$  15/h)  
Randomized to standard of care or Standard of care + ASV

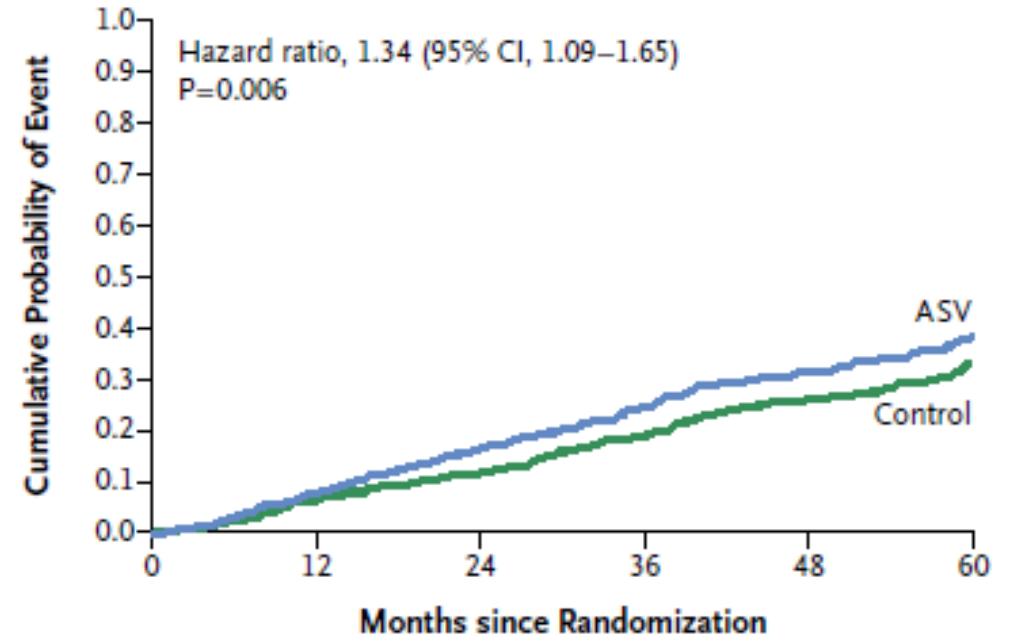
### B Death from Any Cause



#### No. at Risk

Control	659	563	493	334	213	117
ASV	666	555	466	304	189	97

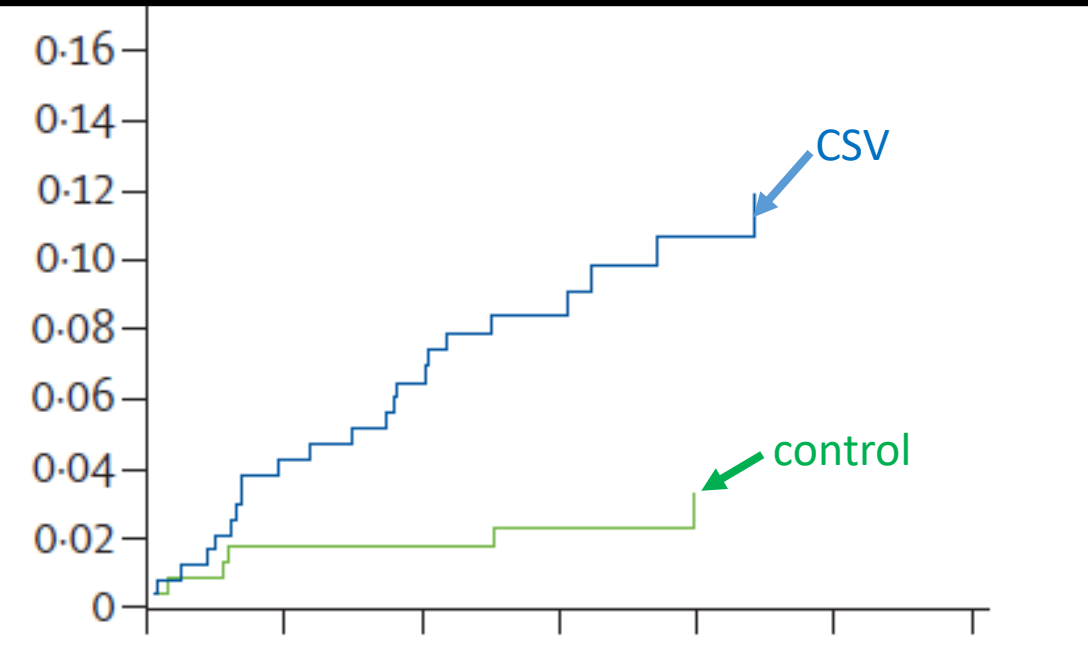
### C Death from Cardiovascular Causes



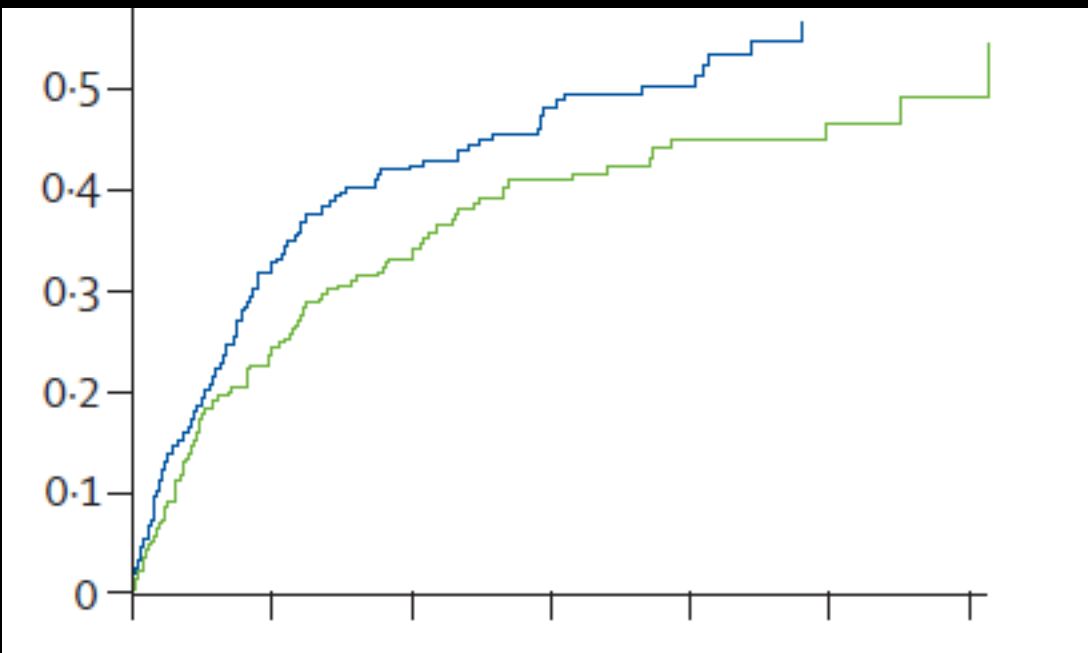
#### No. at Risk

Control	659	563	493	334	213	117
ASV	666	555	466	304	189	97

**EF < 30%**



Cardiovascular death  
w/o previous hospital admission for worsening CHF or life-saving event



Hospital admission for worsening CHF

Observational studies (1) and case reports:

Treatment of CHF **parallels** resolution of CSR