Η σημασία του υπερηχογραφικού δείκτη της συνολικής επιμήκους παραμόρφωσης για την εκτίμηση της λειτουργικότητας της αριστεράς και της δεξιάς κοιλίας σε ασθενείς με καρδιακή αμυλοείδωση

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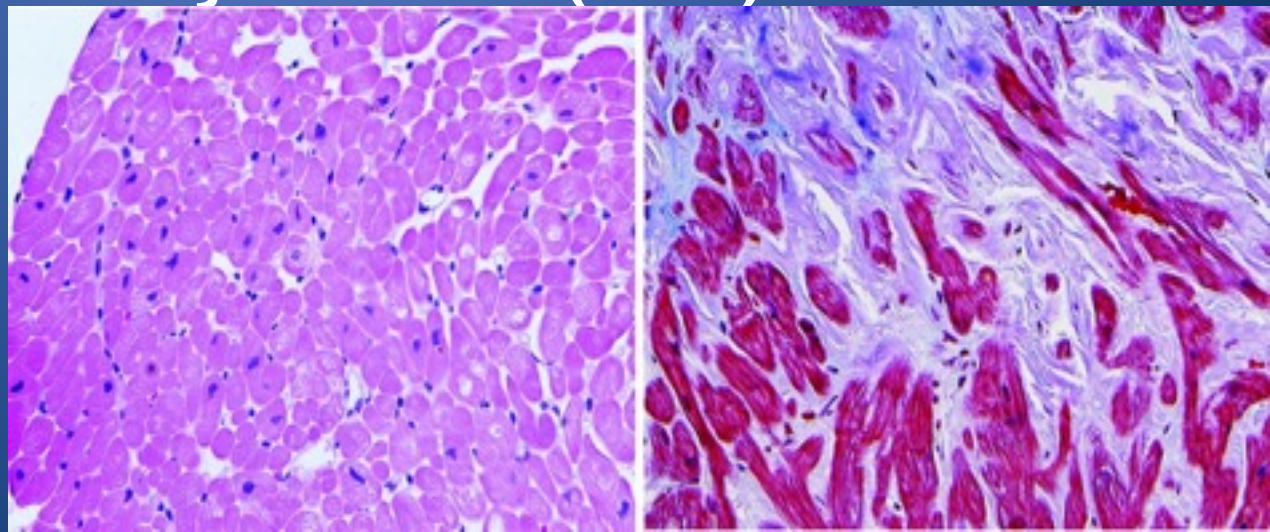
- Immunoglobulin light chain (AL) amyloidosis
- AA amyloidosis
- Hereditary (familial) amyloidosis
- Dialysis-related amyloidosis (B_2M)



- Amyloidosis has a poor prognosis, and the median survival without treatment for AL is only 13 months.
- Cardiac involvement has the worst prognosis and results in death in about 6 months after onset of congestive heart failure.
- Only 5% of the patients with primary amyloidosis survive beyond 10 years

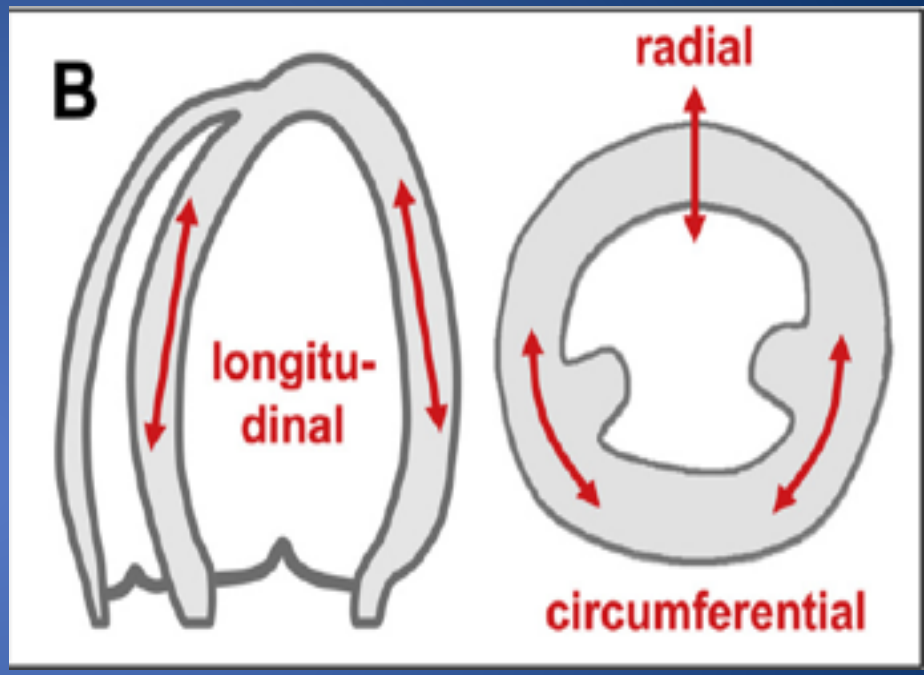
(Kyle et al, 1999)

- Cardiac amyloidosis is characterized by an early impairment in systolic function at a time when fractional shortening remains normal. This abnormality precedes the onset of CHF and can be detected by strain and SR but is not apparent by TV imaging.

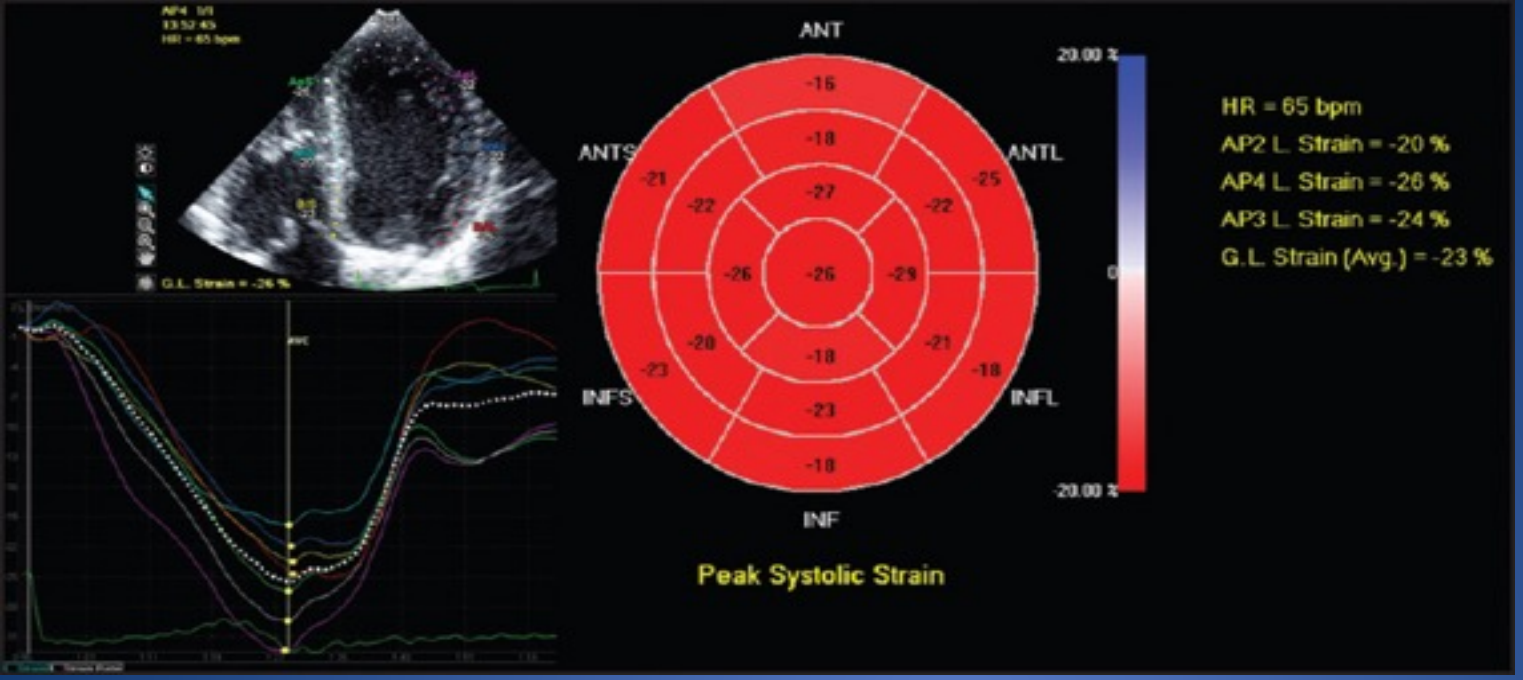
J Koyama, PA Ray-Sequin, RH Falk - Circulation, 2003

- Am Heart Assoc

Definitions



Strain, ϵ, describes myocardial deformation, that is, the fractional change in the length of a myocardial segment. Strain is unitless and is usually expressed as a percentage. Strain can have positive or negative values, which reflect lengthening or shortening, respectively. In its simplest one-dimensional manifestation, a 10-cm string stretched to 12 cm would have 20% positive strain.


ANT
ANTS
ANTL
INFS
INFL
INF
-15
-18
-27
-21
-22
-25
-22
-26
-26
-29
-20
-18
-23
-21
-18
-23
-18
20.00 %
-20.00 %
HR = 65 bpm
AP2 L. Strain = -20 %
AP4 L. Strain = -26 %
AP3 L. Strain = -24 %
G.L. Strain (Avg.) = -23 %
G.L. Strain = -26 %
Peak Systolic Strain

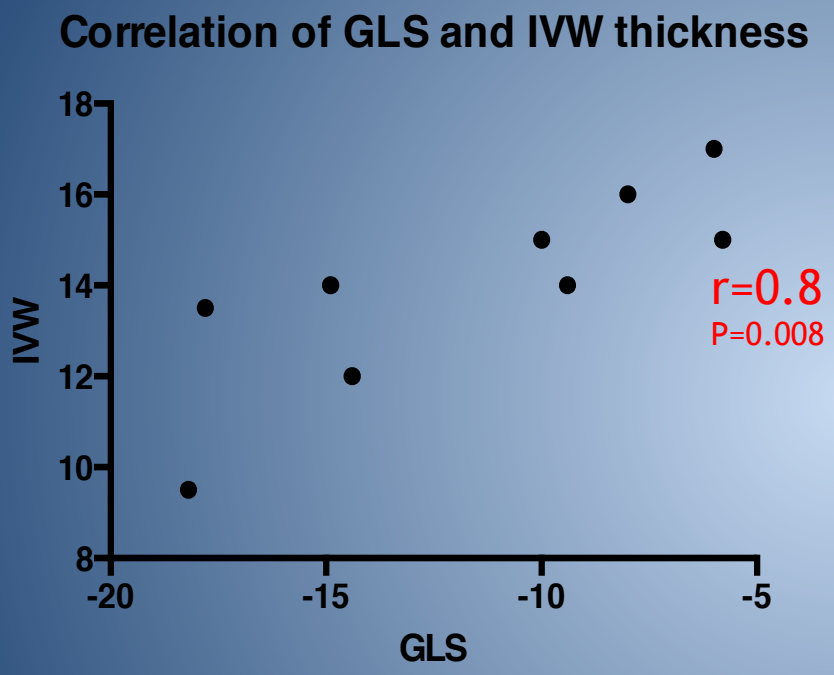
ΣΚΟΠΟΣ

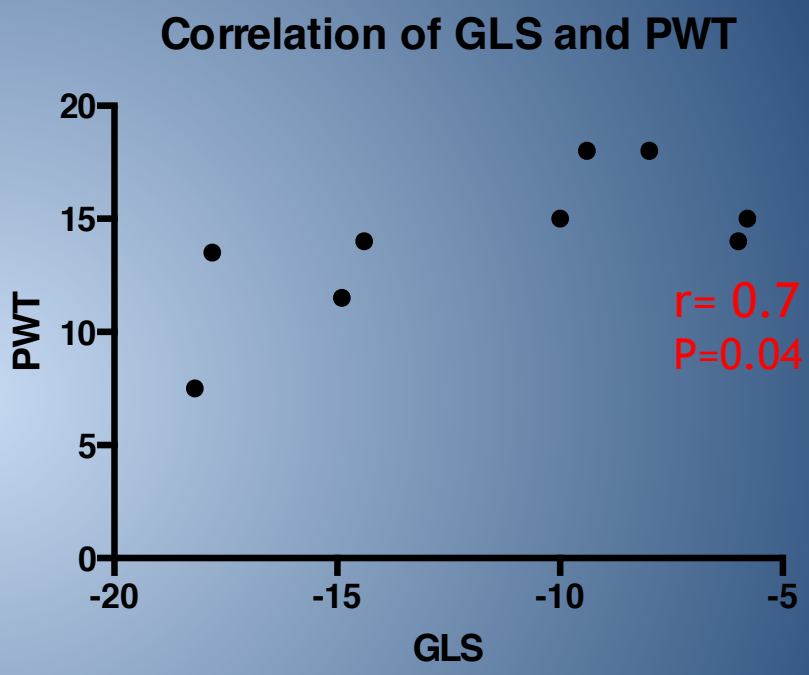
- Σχέση GLS LV vs RV
- Σχέση GLS LV/RV vs LVEF

ΥΛΙΚΟ

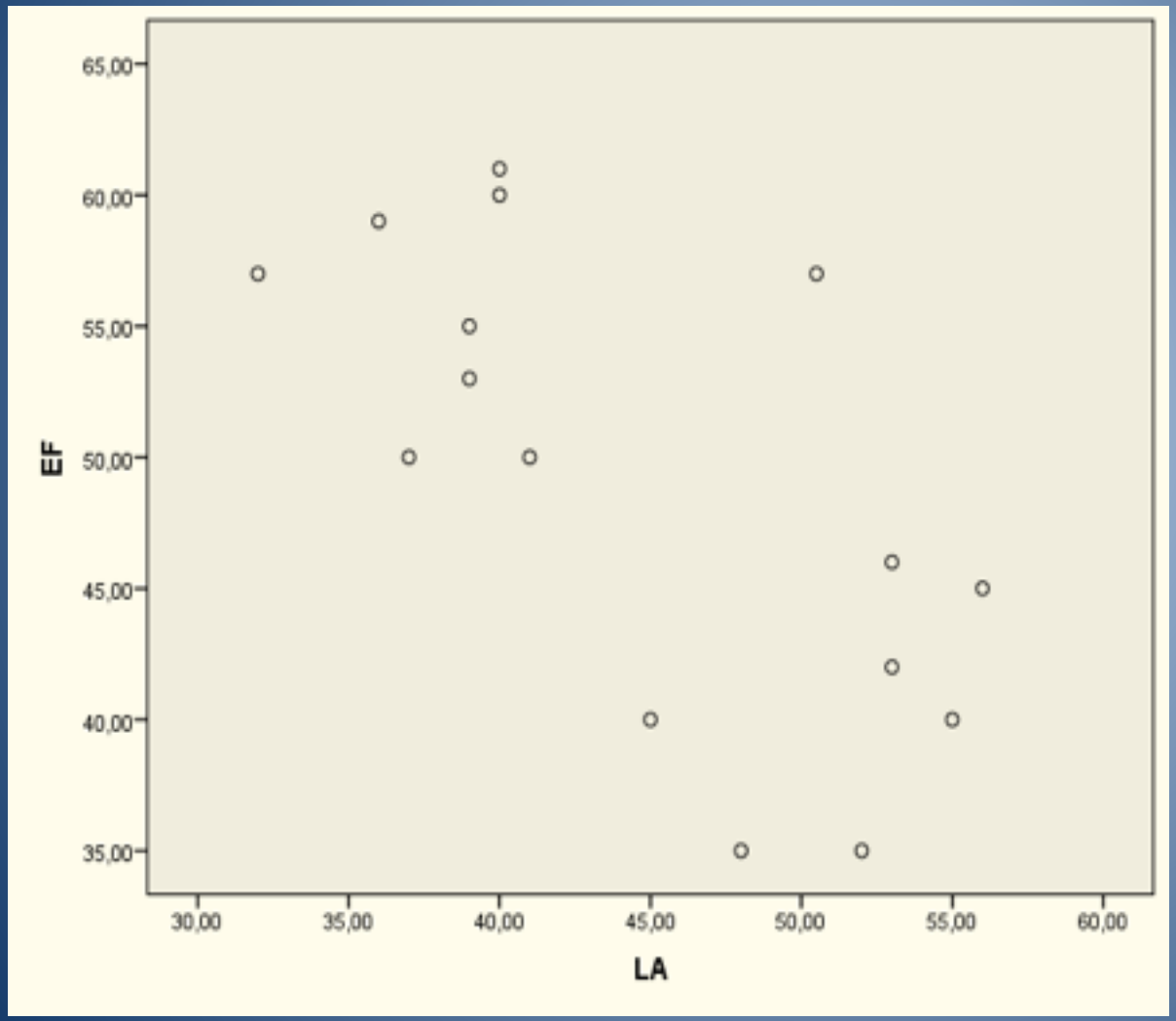
- 16 pts
- Age (62 ± 12 y)
- NYHA II-III
- AL Amyloidosis

	EF>55%	EF<55%	p -
No	6	10	
LVEDD (mm)	41.5 ±6.70	41±5	ns
LVESD (mm)	25±6	29±3	ns
IVS (mm)	12±2	15.5±1	0.04
PWT (mm)	12±3	15.8±1.7	0.04
LA	39.9± 5.97	48.80± 6.24	0.002
TAPSE (mm)	19.6±6.65	16±4.35	ns
STDI RV (cm/s)	11.5±2.38	11.25±1.7	ns
E/Ea	16±9	23±6	0.016
GLS (%)	-15±2.2	-8±1.7	0.008
rvGLS (%)	-17.75±2	-9.72±4	0.037

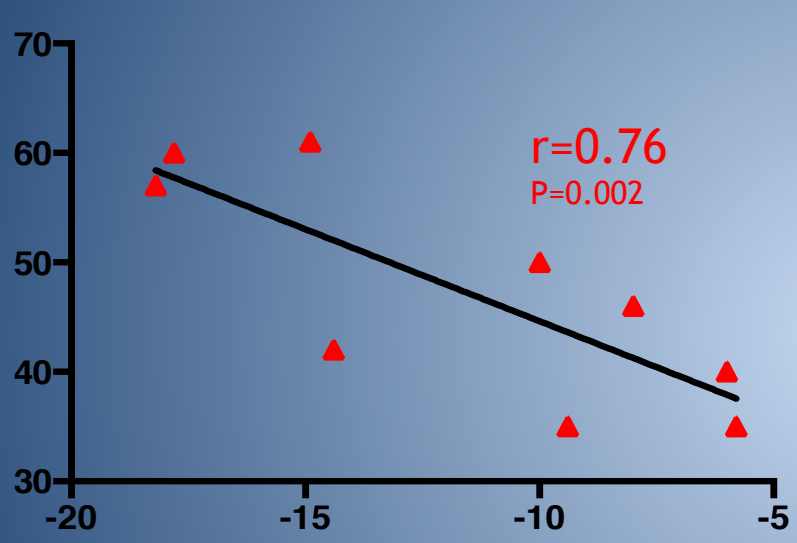

Correlation of GLS and IVW thickness
IVW
18
16
14
12
10
8
-20
-15
-10
-5
GLS
r=0.8
P=0.008

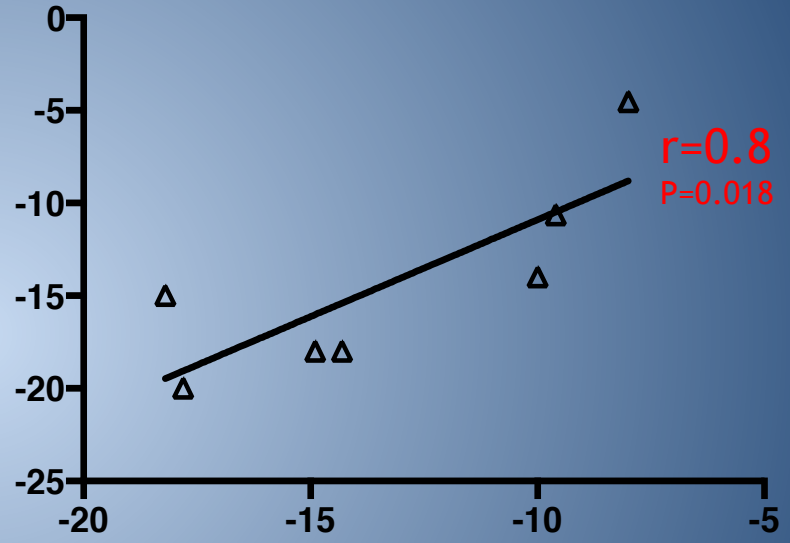

Correlation of GLS and PWT
PWT
20
15
10
5
0
-20
-15
-10
-5
GLS
r= 0.7
P=0.04

Correlation of LA and LVEF



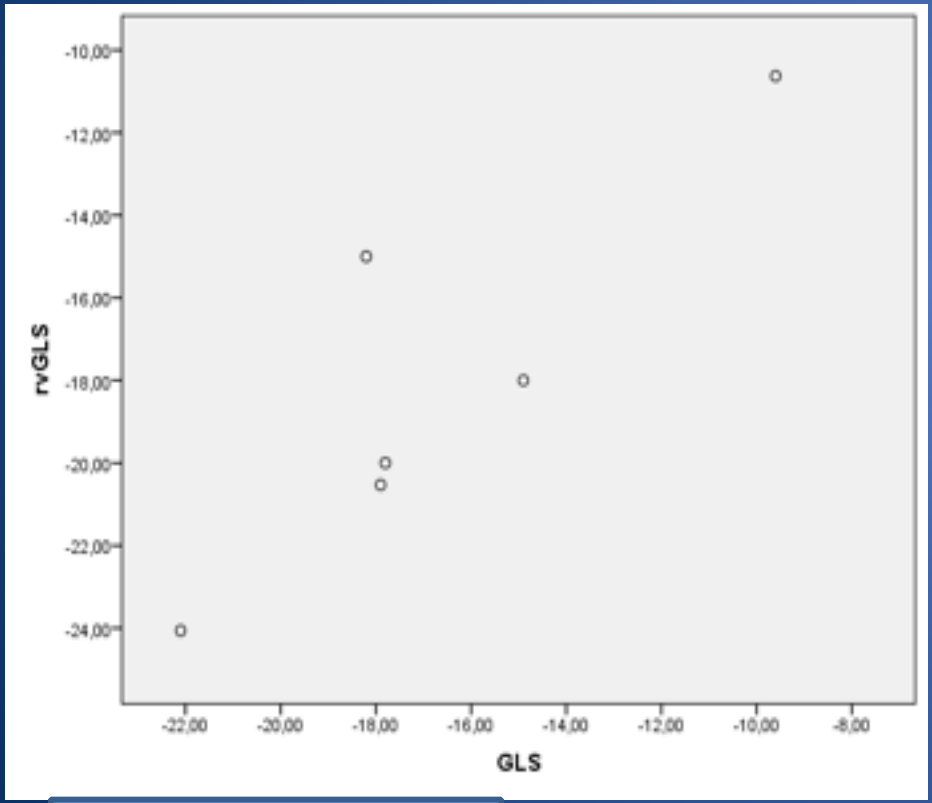
r=-0.7, p=0.01

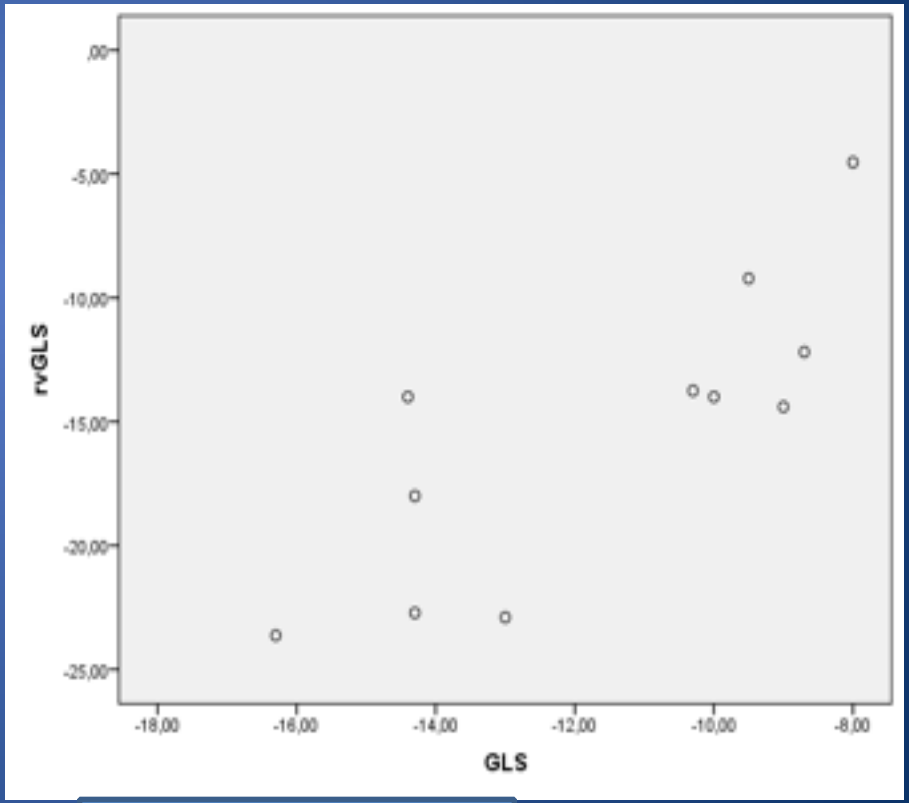

70
60
50
40
30
-20
-15
-10
-5
r=0.76
P=0.002


0
-5
-10
-15
-20
-25
-20
-15
-10
-5
r=0.8
P=0.018

EF>55%

EF≤ 55%



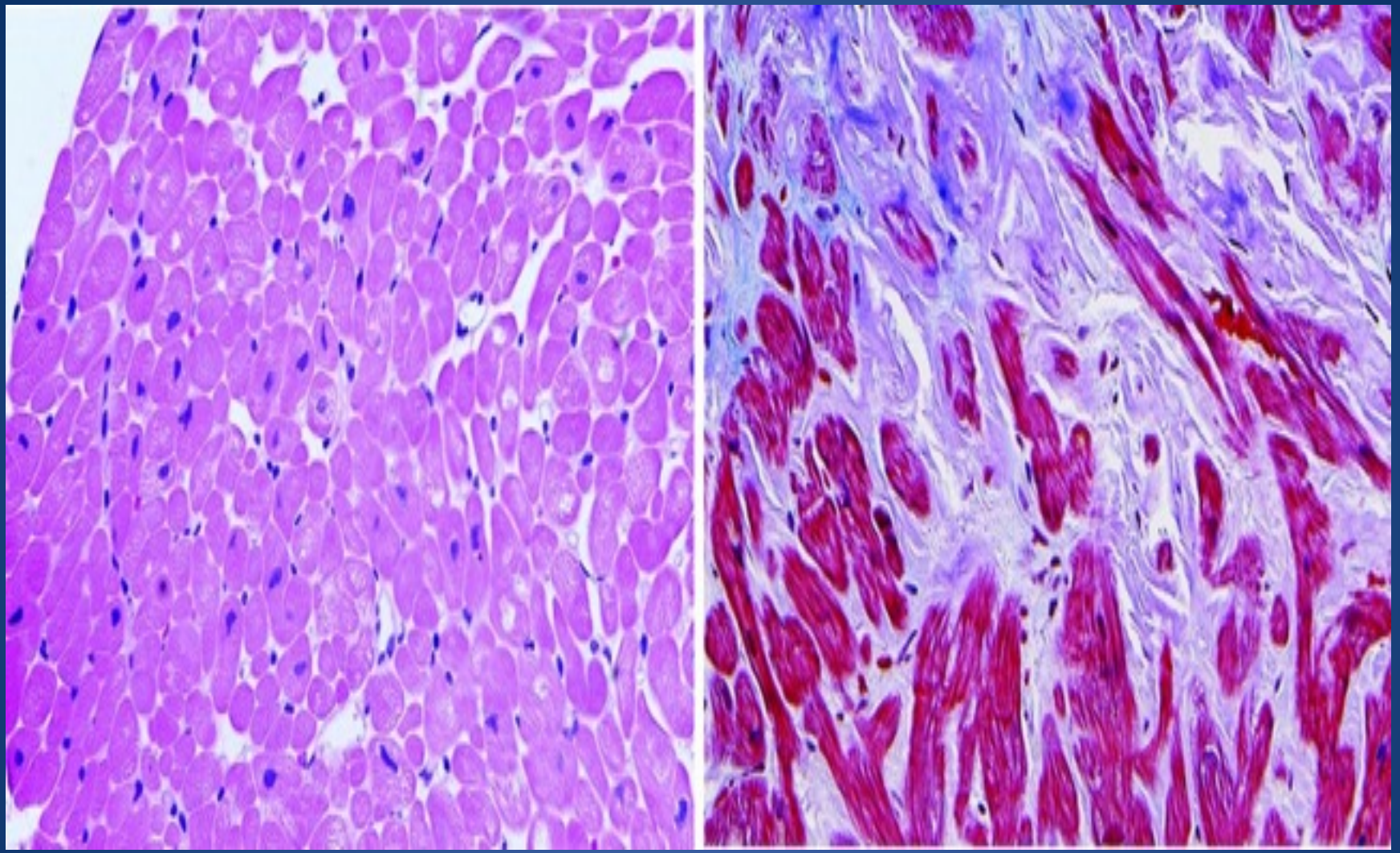


r=0.87, p<0.05

r=0.81, p=0.002

ΣΥΜΠΕΡΑΣΜΑ

Το GLS LV σχετίζεται σημαντικά με το GLS RV σε ασθενείς με καρδιακή αμυλοείδωση με επηρεασμένο ή φυσιολογικό EF LV.



Ευχαριστώ για την προσοχή σας!!