



# Relationship Between Myocardial Amyloid Load Measured by <sup>124</sup>I-evuzamitide and Prognostic Staging Systems in Transthyretin Amyloid Cardiomyopathy

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## BACKGROUND

- <sup>124</sup>I-evuzamitide (AT-01) is a novel pan-amyloid PET radiotracer
- Biomarkers in ATTR-CM measure downstream effects of myocardial infiltration by amyloid fibrils

## OBJECTIVE

We investigated the relationship between <sup>124</sup>I-evuzamitide myocardial uptake and prognostic biomarkers in ATTR-CM

## METHODS

- The study was approved by the OHSU IRB and conducted under an FDA-approved IND.
- Cardiac amyloidosis was suspected or diagnosed in all patients prior to enrollment.
- All subjects were prospectively enrolled and underwent hybrid cardiac PET/MRI with <sup>124</sup>I-evuzamitide.
- Myocardial <sup>124</sup>I-evuzamitide uptake was measured using LV SUVR (ratio of LV myocardium SUV/LV blood pool SUV).
- NT-proBNP, high sensitivity troponin I (hsTnI), and eGFR were measured immediately prior to the PET/MRI scan.

## RESULTS

Table 1. Baseline characteristics of patients diagnosed with ATTR-CM vs controls

Variable	ATTR-CM (N=27)	Controls (N=13)	p-value
Age (years)	76 (59, 90)	67 (45, 81)	<0.05
Male sex	31 (91%)	6 (37.5%)	<0.05
NT-proBNP (pg/dl)	841 (404, 2559)	135 (36, 5819)	<0.05
HsTnI (ng/L)	35 (16.8, 60.8)	7 (3, 41)	<0.05
eGFR (ml/min/m <sup>2</sup> )	48 (SD 12.4)	55 (35, 76)	<0.05

Table 2. Breakdown of ATTR-CM patients by Mayo and NAC stage

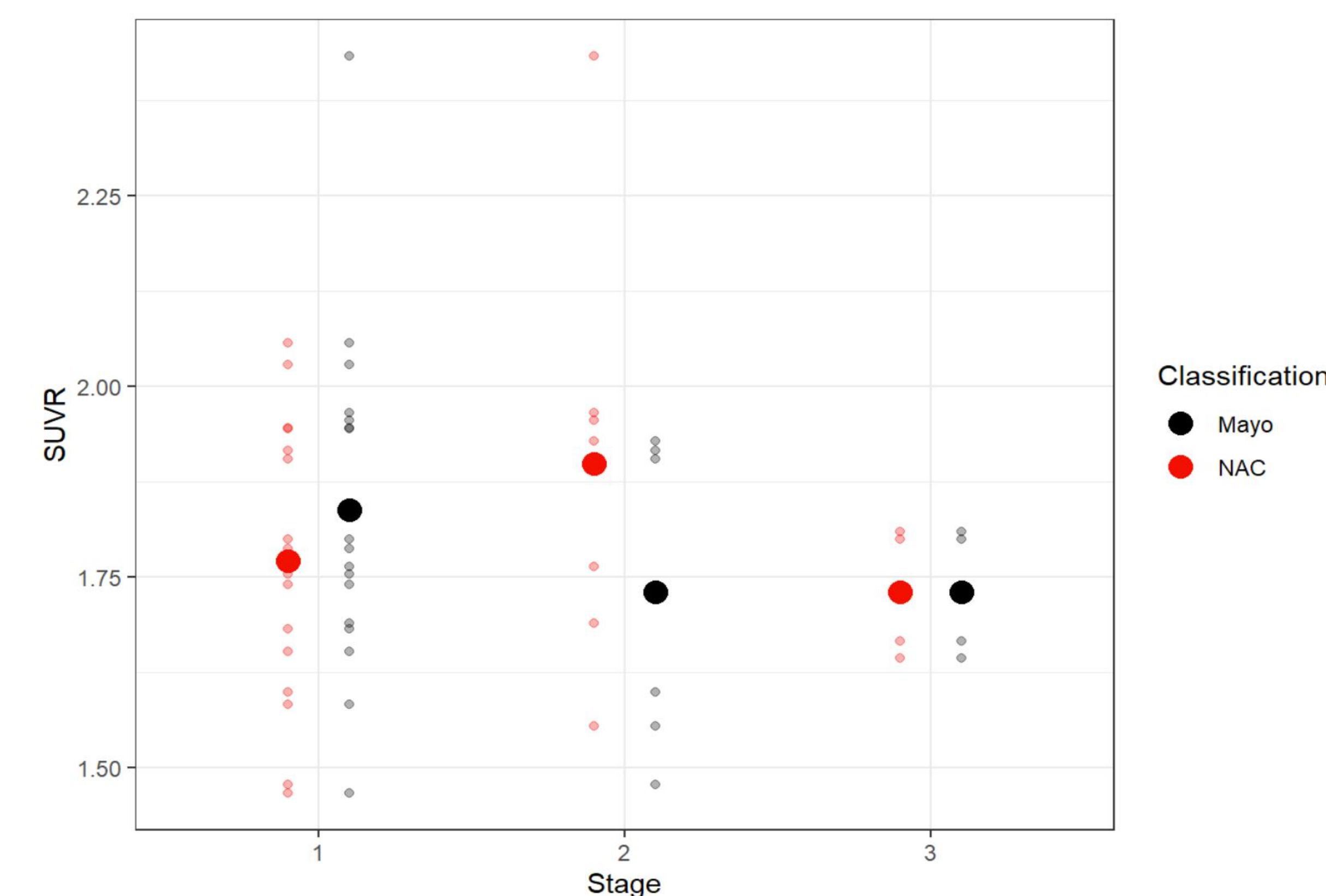
Mayo Stage	No. of patients (%)
I	17 (63)
II	6 (22)
III	4 (15)

NAC Stage	No. of patients (%)
I	16 (59)
II	7 (26)
III	4 (15)

Table 3 Correlation with LV SUVR vs biomarkers in ATTR-CM patients

Variable	Correlation with myocardial <sup>124</sup> I-evuzamitide SUVR (Spearman r, 95% CI)	p-value
NT-proBNP	0.39 ( 0.08, 0.63)	0.012
HsTnI	0.48 ( 0.18, 0.69)	0.001
eGFR	-0.25 (-0.52, 0.07)	0.120

Figure 1. Distribution of SUVR by Mayo and NAC Stages



Large points represent mean SUVR value, smaller points are observed values. SUVR and Mayo stages (p=0.441). SUVR and NAC stages (p=0.318)

## CONCLUSIONS

- NAC and Mayo Stages did not correlate with myocardial amyloid burden measured by <sup>124</sup>I-evuzamitide
- NTproBNP and hsTnI correlated with myocardial amyloid burden measured by <sup>124</sup>I-evuzamitide
- Validation studies are needed to help understand the utility and significance of directly measuring myocardial amyloid load compared to the downstream effects of fibril infiltration

## DISCLOSURES

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