

# **mSMART**

## **Mayo Consensus on AL Amyloidosis: Prognosis**

# Mayo AL amyloidosis prognostic system (2012) <sup>1</sup>

Mayo System	Troponin T	NT-proBNP, ng/L	dFLC, mg/L	Stage
2012	< 0.025 mcg/L, or if high sensitivity, < 40 pg/L <sup>2,3</sup>	< 1800	< 180	I = all low; II = one elevated; III = two elevated; IV = all three elevated

<http://msmart.org>  
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<sup>1</sup> Kumar *J Clin Oncol.* 2012;30:989-995.

<sup>2</sup> Kumar <https://www.ncbi.nlm.nih.gov/pubmed/30433848>

<sup>3</sup> Muchtar <https://www.ncbi.nlm.nih.gov/pubmed/30545829>

# AL amyloid Staging Systems Conversion:

*use one troponin threshold and one BNP threshold except where indicated*

Model	cTnT	cTnI	Hs-cTnT	NT-proBNP	BNP
Mayo 2004 model <sup>a</sup>	≥ 0.035 mcg/L	≥ 0.1 mcg/L	≥ 50 ng/L <sup>e</sup>	≥ 332 ng/L	≥81 ng/L
Modification of Mayo 2004 model <sup>b</sup>	≥ 0.035 mcg/L	≥ 0.1 mcg/L <sup>f</sup>	≥ 50 ng/L <sup>e,f</sup>	≥ 332 ng/L ≥ 8500 ng/L	≥ 81 ng/L ≥ 700 ng/L
Mayo 2012 model <sup>c</sup>	≥ 0.025 mcg/L	ND	≥ 40 ng/L <sup>f</sup>	≥ 1800 ng/L	≥ 400 ng/L <sup>g</sup>
Mayo ASCT troponin risk marker <sup>d</sup>	≥ 0.06 mcg/L	ND	≥ 75 ng/L <sup>f</sup>	--	--

Abbreviations: ASCT, Autologous stem cell transplantation; NA, not applicable; ND, no data.

<sup>a</sup> Original 3 stage model using cTnT and NT-proBNP cut-points as listed. cTnI also tested in same paper

<sup>b</sup> Original 3 stage model using cTnT and NT-proBNP cut-points as listed, but separate stage III into IIIa and IIIb based on whether or not NT-proBNP is higher than 8500 ng/L.

<sup>c</sup> 4 stage model using cTnT and NT-proBNP cut-points as listed along with difference of involved free light chain ≥ 18 mg/dL.

<sup>d</sup> Simple binary troponin T threshold predicting for transplant-related mortality 25% versus 4%

<sup>e</sup> In separate study, hs-cTnT 54 found to be comparable to cTnT cut-point of 0.035, but re-analysis using quartic formula yielded 51 ng/L

<sup>f</sup> Extrapolated numbers are based on quartic formula applied to a dataset of 224 newly diagnosed AL amyloidosis patients.<sup>10</sup>

<sup>g</sup> In original study, BNP threshold was found to be comparable NT-proBNP

# ATTR amyloid staging systems conversion:

*use one troponin threshold and one BNP threshold except where indicated*

Model	cTnT	cTnl	Hs-cTnT	NT-proBNP	BNP
Mayo ATTRwt	≥ 0.05 mcg/L	ND	≥ 65 ng/L <sup>a</sup>	3000 ng/L	ND
NAC ATTR <sup>b</sup>	NA	NA	NA	3000 ng/L	NA

Abbreviations: ASCT, Autologous stem cell transplantation; ATTRwt, Wild-type Transthyretin amyloidosis; NA, not applicable; NAC, National amyloidosis center (UK); ND, no data.

<sup>a</sup> Extrapolated numbers are based on quartic formula applied to a dataset of 224 newly diagnosed AL amyloidosis patients.<sup>10</sup>

<sup>b</sup> eGFR threshold of <45 ml/min/1.73m<sup>2</sup> is used in addition to the NT-proBNP.