



# THE ROLE OF TRANSIENT ELASTOGRAPHY IN THE ASSESSMENT OF LIVER FIBROSIS IN PATIENTS WITH MYELODYSPLASTIC SYNDROMES

Theoni Kanellopoulou, Spilios Manolakopoulos, Anna Filiotou, Antonios Maris, Flora N. Kontopidou, Hariklia Kranidioti, George V. Papatheodoridis, and Dimitrios Pectasides

2nd Department of Internal Medicine, Athens Medical School, General Hospital of Athens Hippokration, Greece

## INTRODUCTION

- Myelodysplastic syndromes (MDS) are hematopoietic stem-cell malignancies characterized by ineffective blood cell production.
- Most MDS patients eventually become red blood cell transfusion dependent, risking iron overload, which may lead to cardiac and hepatic failure.
- Liver biopsy is the gold standard for liver damage assessment. However it is associated with a number of complications.



- Liver transient elastography (TE, Fibrocan®-Echosens Paris) allows the estimation of hepatic fibrosis through the measurement of liver stiffness.

## AIM

- Our aim was to explore possible associations of liver stiffness measured with TE, with transfusion overload and ferritin level in a group of patients with MDS.

## PATIENTS AND METHODS

- 20 patients with MDS were studied.
- Patients with other causes of chronic liver disease were excluded.
- The following variables were collected the same day of TE evaluation: Serum ferritin, hemoglobin, platelets, aminotransferases, g-glutamyltransferase (GGT), total bilirubin

## RESULTS

### DEMOGRAPHIC CHARACTERISTICS

Male(N - %)	17	85%
Age (mean -range)	73.9 years	60-87
BMI (mean-range)	24.5 Kg/m <sup>2</sup>	21-29
High-risk MDS (N-%)	11	55%
Years from diagnosis (mean-range)	4.6 years	1-21
Transfusions ≥25 units	12	60%
Chelation treatment (N-%)	5	25%

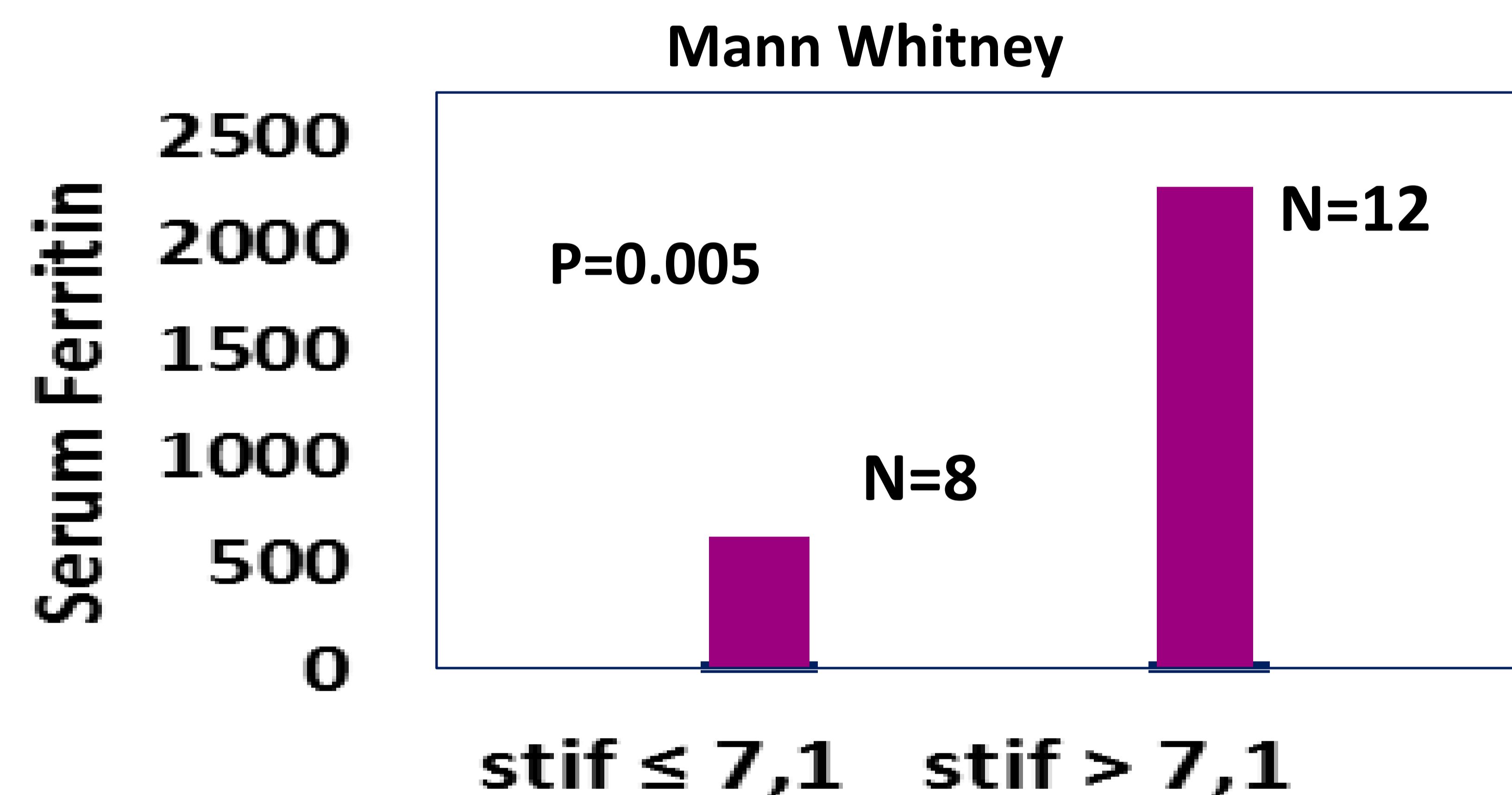
### ASSOCIATION OF LIVER STIFFNESS

LABORATORY DATA	Mean (range)	P (Pearson)
<b>Ferritin (µg/mL)</b>	<b>1603 (67-6399)</b>	<b>Log (stiffness) 0.004</b>
<b>PLT (x10<sup>3</sup> cells/µL)</b>	<b>238 (10-800)</b>	<b>0.002</b>
<b>GGT (IU/L)</b>	<b>44 (10-134)</b>	<b>&lt;0.001</b>
AST (IU/L)	20 (12-49)	0.917
ALT (IU/L)	24 (6-81)	0.553
Bilirubin (mg/dL)	0.94 (0.26-2.5)	0.637

No conflict of interest

## RESULTS

Level of serum ferritin is associated with liver stiffness in patients with MDS



### MULTIVARIATE ANALYSIS

Model	Log (stiffness)
(constant)	P < 0.0001
Ferritin	P = 0.035
GGT	P = 0.026
PLT	P = 0.091

## CONCLUSIONS

- Our data is suggesting that liver stiffness measured by TE was found to be correlated with serum ferritin level, GGT and platelets.
- Further investigation is needed in order to explore the role of TE for the assessment of chelation therapy on liver fibrosis in patients with MDS syndromes and post-transfusion iron overload.