

Expression levels of IncRNA DANCER and IncRNA MIR17HG in patients with multiple myeloma: Relation to disease characteristics and other prognostic markers

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INTRODUCTION

Multiple myeloma is a malignant hematological disorder characterized by uncontrolled proliferation of clonal plasma cells in the bone marrow, leading to organ damage as bone lesions, anemia, renal impairment and hypercalcemia. Long non-coding RNAs such as DANCER and MIR17HG lncRNAs play essential roles in different solid and hematological malignancies, making them promising biomarkers and potential therapeutic targets.

AIM

Our objective was to evaluate the expression levels of IncRNA DANCER and IncRNA MIR17HG in patients with multiple myeloma and their relation to disease characteristics and other prognostic factors.

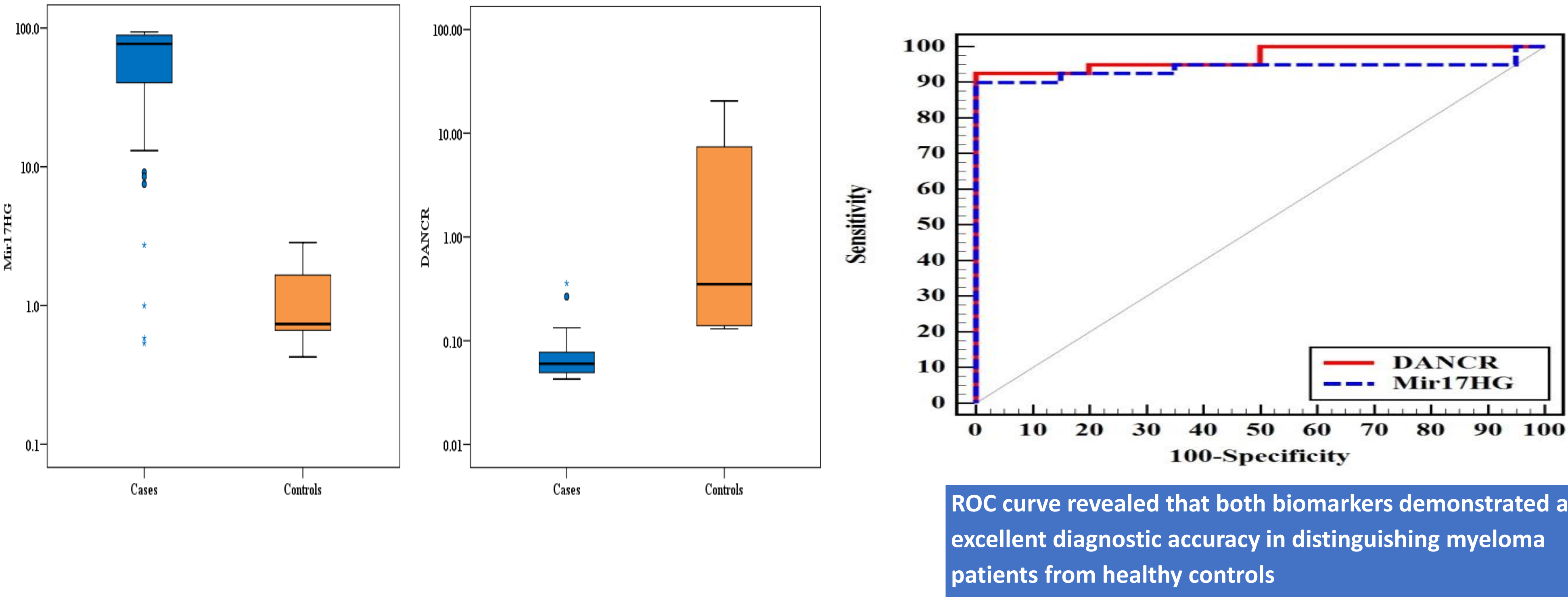
METHOD

This was a case-control study including 40 patients with multiple myeloma and 20 healthy controls. Expression level of DANCER and MIR17HG genes was analyzed by qPCR using the comparative Ct method after normalization for the expression of GAPDH as endogenous controls. Then the expression level of each gene was compared with different clinical and laboratory data.

CONCLUSIONS

In conclusion, DANCER and MIR17HG are important long non-coding RNAs that played an opposing role in multiple myeloma .DANCER gene was downregulated in myeloma patients and achieved an important tumor-suppressive role. However, MIR17HG was overexpressed and achieved a significant oncogenic role in those patients.

RESULTS



	DANCER		Mir17HG	
	r _s	P	r _s	P
Hb (g/dL))	0.465*	0.002*	0.230	0.154
WBCs (x103/μL)	0.371*	0.018*	0.299	0.061
LDH (U/L)	0.146	0.368	0.447*	0.004*
Ionized calcium (mmol/L)	-0.331	0.037*	-0.254	0.113
β2MG (mg/L)	0.283	0.076	0.355*	0.024*
Total protein (g/dL)	-0.349*	0.027*	-0.277	0.084
M-band(g/dL)	-0.313	0.049*	-0.224	0.164

Abbreviations used: DANCER, Differentiation Antagonizing Non-Protein Coding RNA; MIR17HG, miR-17-92 cluster host gene; qPCR, quantitative polymerase chain reaction; GAPDH, Glyceraldehyde-3-phosphate dehydrogenase; CR, Complete response; VGPR, Very good partial response; PR, Partial response; PD, Progressive disease.

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