

Lung resistance-related protein (LRP) predicts favorable therapeutic outcome in Acute Myeloid Leukemia

Running Title: LRP predicts favorable AML outcome

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Supplementary Table 1: Summary of therapeutic outcomes in relationship with MDR1, MRP2 and LRP. Note the citations as given in the 'References' section in the article.

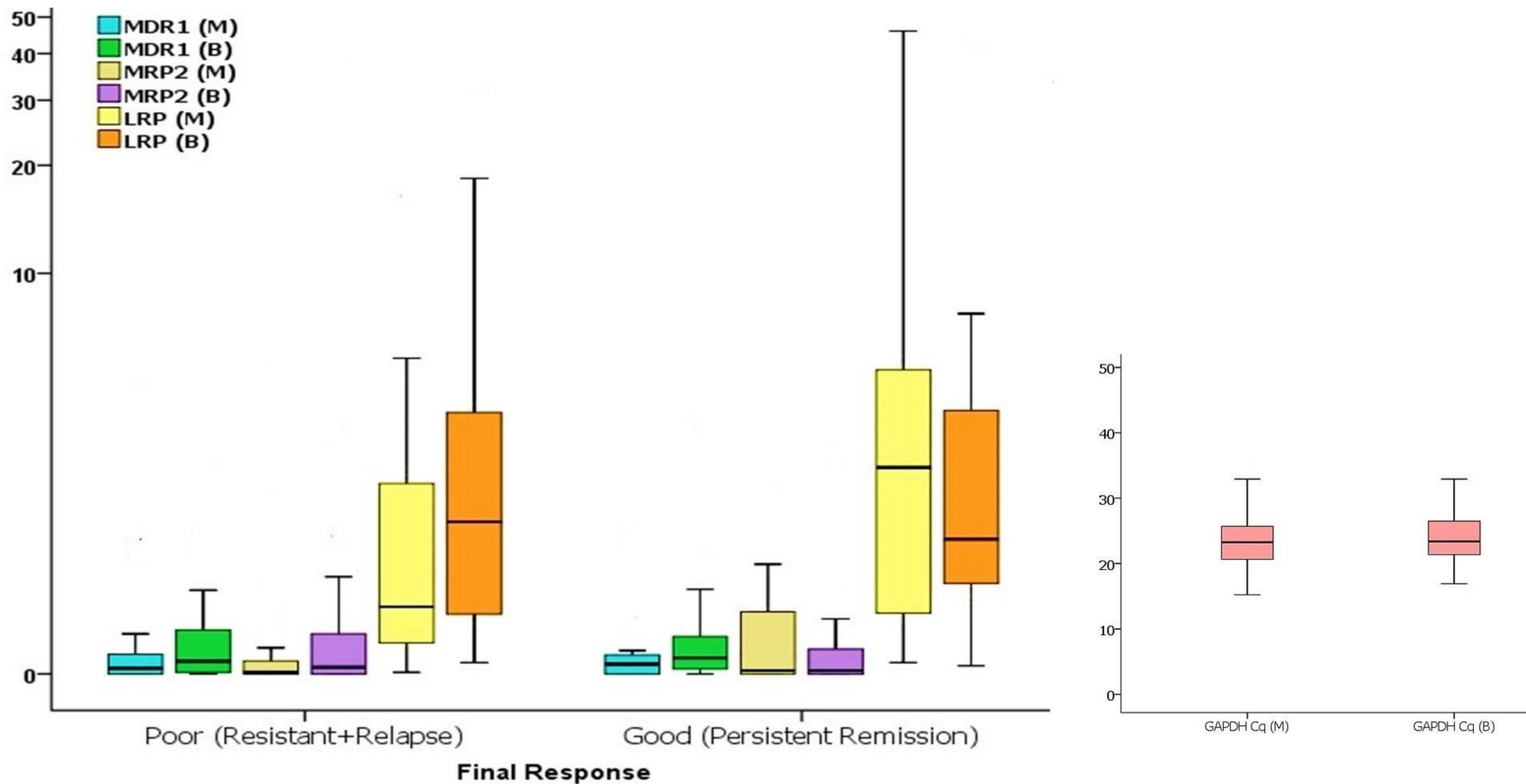
Cancer (n)	N citation	Drugs	Techniques	<i>Effect of INCREASED gene expression on:</i>			
				CR	Relapse	DFS	OS
Multidrug resistance protein 1 (MDR1)							
AML	331 ⁵	Daunorubicin, Cytarabine	SqPCR	Decreased	-	-	Decreased
	211 ⁶		FCM	Decreased	-	None	None
	30 ¹⁸	Daunorubicin, Idarubicin, Etoposide, Mitoxantrone	qPCR, FCM	-	None	-	-
AML, ALL	26, 18 ⁷	Anthracyclines, Vincristine, Etoposide	qPCR	None	Increased	-	-
	39, 32 ¹⁰	AML: Cytarabine, Idarubicin, ALL: Vincristine, Prednisone, Daunorubicin, L-asparaginase	sqPCR	None	None	-	Decreased
ALL	49 ¹⁹	BFM95 Protocol: Methotrexate, Vincristine, Prednisone, Daunorubicin, L-asparaginase	sqPCR	-	Increased	Decreased	-
	30 ⁹	Dexametasone, Vincristin, Daunomycin, TIT (Methotrexate, Cytarabine, Dexamethasone), L-asparaginase, Cytarabine	sqPCR	None	-	None	None
Breast	59 ¹⁶	FAC/FEC	qPCR	Decreased	-	Decreased	-
	54 ²¹	FAC/FEC	qPCR	None	None	None	None
Ovary	61 ⁸	Carboplatin, Paclitaxel, Cyclophosphamide, Treosulfan, Topotecan, Gemcitabine	sqPCR	None	-	Decreased	Decreased
Multidrug resistance associated protein 2 (MRP2)							
AML	30 ¹⁸	Daunorubicin, Idarubicin, Etoposide, Mitoxantrone	qPCR, FCM	-	None	-	-
ALL	105 ²⁶	Vincristine, Dexamethasone, L-asparaginase	qPCR	-	Increased	Decreased	-
AML, ALL	39, 32 ¹⁰	AML: Cytarabine, Idarubicin ALL: Vincristine, Prednisone, Daunorubicin, L-asparaginase	sqPCR	-	-	-	Decreased

Breast	59 ¹⁶	FAC/FEC	qPCR	None	-	-	-
Ovary	61 ⁸	Carboplatin, Paclitaxel, Cyclophosphamide, Treosulfan, Topotecan / Gemcitabine	sqPCR	None	-	Decreased	-
Ovary + in vitro Hepatocyte	22 ²⁷ + in vitro	Cisplatin	IHC	low drug sensitivity	-	-	Increased (patients)
Esophagus	81 ¹³	Cisplatin	IHC, qPCR	-	-	-	Decreased
Lung resistance related Protein (LRP) or major vault protein (MVP)							
AML	331 ⁵ , 211 ⁶	Daunorubicin, Cytarabine	sqPCR	None	-	-	-
	67 ³⁸		sqPCR	Decreased	-	-	-
AML, ALL	39, 32 ¹⁰	AML: Cytarabine, Idarubicin, ALL: Vincristine, Prednisone, Daunorubicin, L-asparaginase	sqPCR	Decreased	-	-	-
ALL	30 ⁹	Dexametasone, Vincristin, Daunomycin, TIT (Methotrexate, Cytarabine, Dexamethasone), L-asparaginase, Cytarabine	sqPCR	None	Increased	Decreased	Decreased
	49 ¹⁹	BFM95 Protocol: Methotrexate, Vincristine, Prednisone, Daunorubicin, L-asparaginase	qPCR	None	-	-	-
	45 ³⁵	Dexamethasone, 6-mercaptopurine, L-asparaginase	qPCR	Decreased	-	-	-
NSCLC	92 ³⁷	Vinorelbine, Cisplatin	IHC	-	-	-	Decreased
Testis	70 ¹⁷	Cisplatin	IHC, WB	Decreased	-	-	Decreased
Breast	59 ¹⁶	FAC/FEC	qPCR	-	-	Decreased	-

Abbreviations:

ALL: Acute lymphoblastic leukemia; **AML:** Acute myeloid leukemia; **CR:** Complete remission; **DFS:** Disease-free survival; **FAC/FEC:** fluorouracil, doxorubicin/ epirubicin, cyclophosphamide; **FCM:** Flow cytometry; **IHC:** Immunohistochemistry; **NSCLC:** Non-small cell lung cancer; **OS:** Overall survival; **qPCR:** Quantitative polymerase chain reaction; **sqPCR:** Semi-quantitative polymerase chain reaction; **WB:** Western blotting.

Supplementary Figure 1: Boxplots showing gene expression (logarithmic scale) of MDR-1, MRP-2, and LRP in bone marrow (M) and peripheral blood (B). Note the uniform distribution (linear scale) of the Cq values of the house-keeping gene GAPDH in bone marrow and blood samples.



Supplementary Figure 2: Kaplan-Meier survival curves at OncoLnc® database (www.oncolnc.org/search_results/?q=mvp) according to LRP (MVP) expression in invasive carcinoma of breast (BRCA), renal papillary cell carcinoma (KIRP), sarcoma (SARC), and AML (LAML). The adjusted p-values (q-values) are given.

