Increased plasma levels of galectin-1 in pancreatic cancer: potential use as biomarker

SUPPLEMENTARY MATERIALS

Supplementary Table 1: Summary of the clinicopathological data of patients included in the analysis of the quantification of Gal-1 expression by IHC in tissue

		n	Median	IQR	*p*
Age					
	≤70	30	41.80	42.92	
	>70	48	32.23	41.73	ns
Sex					
	Male	45	33.70	50.04	
	Female	33	37.75	40.38	ns
Pathology					
	Healthy	19	4.60	6.06	
	Pancreatitis	13	59.33	27.07	<0.001
	PanIN	9	29.77	14.82	<0.001
	IPMN	7	25.76	16.14	<0.001
	PDA	30	54.29	26.61	<0.001
TNM					
	0	1	63.46	-	
	1A	2	68.75	-	ns
	2A	7	58.52	21.72	ns
	2B	16	54.29	18.53	ns
	3	3	32.60	-	ns/0.023*
	4	1	31.76	-	ns
Grade					
	1	5	61.47	41.94	
	2	12	49.00	35.85	ns
	3	13	55.86	19.43	ns
Survival					
	<2 years	12	54.28	28.78	
	≥2 years	16	50.66	29.52	ns

p, comparison with respect to the first category of the group being evaluated; *p, comparison of TNM 2B to TNM 3; ns, not significant.

Supplementary Table 2: Clinicopathological data of patients included for Gal-1 detection in plasma samples by ELISA

		Barcelona-HM			Liverpool-UL			Madrid-HUMC		
		n	Sex (M/F)	Age (Range)	n	Sex (M/F)	Age (Range)	n	Sex (M/F)	Age (Range)
Pathology										
Control		7	(4/3)	(38–75)	14	(9/5)	(49–66)	7	(4/3)	(48–55)
CP		23	(17/6)	(27–84)	27	(18/9)	(26–76)	2	(0/2)	(50–56)
PDA		31	(17/14)	(51–90)	28	(15/13)	(42–88)	31	(15/16)	(42–90)
Stage										
	I	2			2			0		
	II	10			18			3		
	III	5			0			6		
	IV	14			8			20		
	NA	0			0			2		
Grade										
	Low	10			5			2		
	High	3			18			9		
	N/A	18			5			20		
Metastasis										
	No	17			20			10		
	Yes	14			8			21		

N/A: not ascertained.

Supplementary Table 3: Analysis of Gal-1 plasma levels according to age in the healthy controls of the three cohorts

Cohort	n	Mean	SD	Min	Max	p (Spearman)
Barcelona-HM	7	56.43	11.30	38	75	0.819
Liverpool-UL	14	56.86	4.94	49	66	0.265
Madrid-HURC	7	51.57	3.21	48	55	0.857

$p > 0.05$ in all cases; Spearman correlation.

Supplementary Table 4: Comparison of Gal-1 plasma levels between men and women in the healthy controls of the three cohorts

Cohort	Sex	*n*	Median	IQR	*p* (Mann–Whitney)
Barcelona-HM	Male	4	13.02	14.11	
	Female	3	23.25	-	0.4
Liverpool-UL	Male	9	17.47	7.47	
	Female	5	13.39	9.31	0.112
Madrid-HUMC	Male	4	16.00	7.72	
	Female	3	16.00	-	0.857

p > 0.05 in all cases; Mann–Whitney test.

Supplementary Table 5: Gal-1 plasma levels according to bilirubin levels or diabetes status in PDA patients of the three cohorts

		Barcelona-HM				Liverpool-UL				Madrid-HUMC			
		n	Median	IQR	*p*	*n*	Median	IQR	*p*	*n*	Median	IQR	*p*
Bilirubin													
	Normal	23	34.74	15.64		23	23.91	12.88		22	20.85	9.0	
	High	9	44.14	26.65	ns	28	28.832	7.44	ns	9	23.4	18.0	ns
Diabetes													
	No	21	30.29	12.31		49	21.42	9.58		23	21.6	13.0	
	yes	15	42.68	19.56	ns	20	24.865	10.97	ns	10	19.9	5.0	ns

ns, not significant.

Supplementary Table 6: Data for ROC analysis for Gal-1 (three cohorts) and CA19-9 (Barcelona-HM cohort)

Cohort	Groups		AUC	SE	*p*	Cut-off	Sensitivity	Specificity
Barcelona-HM	**Gal-1**							
		Ctl vs CP	0.932	0.045	0.001	28.16	82.6	100
		Ctl vs PDA	0.880	0.056	0.002	28.15	77.4	100
		CP vs PDA	0.568	0.078	0.396	-	-	-
Barcelona-HM	**CA19-9**							
		Ctl vs CP	0.610	0.122	0.386	-	-	-
		Ctl vs PDA	0.882	0.056	0.002	70.5	82.8	100
		CP vs PDA	0.865	0.057	<0.0001	88.1	82.8	95.5
Liverpool-UL	**Gal-1**							
		Ctl vs CP	0.688	0.091	0.051	16.86	88.9	50
		Ctl vs PDA	0.837	0.064	<0.0001	22.83	75	85.7
		CP vs PDA	0.669	0.075	0.031	22.39	75	63
Madrid-HURC	**Gal-1**							
		Ctl vs PDA	0.783	0.079	0.021	21.3	54.8	100

AUC, area under curve; CP, chronic pancreatitis group; Ctl, control group; PDA, pancreatic ductal adenocarcinoma group; SE, standard error associated with AUC.

Supplementary Table 7: CA19-9 levels in Barcelona-HM cohort

	n	Median	IQR	*p*
Control	7	9.00	22.40	
CP	22	13.30	28.05	0.409
PDA	29	405.10	689.95	0.001/0.000*

*p value of CP compared to PDA. CP, chronic pancreatitis group; PDA, pancreatic ductal adenocarcinoma group.

Supplementary Table 8: Correlation of Gal-1 plasma levels (standardized in three cohorts) and survival of PDA patients

Gal-1 standardized	*n*	Median	IQR	*p*
Short term (<6 months)	16	4.67	5.47	
Long term (≥6 months)	14	1.80	2.02	0.09