

# PREDICTIVE VARIABLES OF GLP-1 LEVELS IN THE POSTPARTUM REASSESSMENT OF WOMEN WITH A HISTORY OF GESTATIONAL DIABETES

GP-81

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## INTRODUCTION

The diversity pattern of GLP-1 secretion in healthy subjects and patients with carbohydrate metabolism disorders need to be identified and characterized to analyze individual responses to GLP-1.

## OBJETIVE

To study the GLP-1 pattern of secretion after an oral glucose tolerance test (OGTT) in women in postpartum reassessment of previous gestational diabetes (GDM). To evaluate clinical and laboratory parameters that can influence GLP-1 secretion.

## MATERIAL AND METHODS

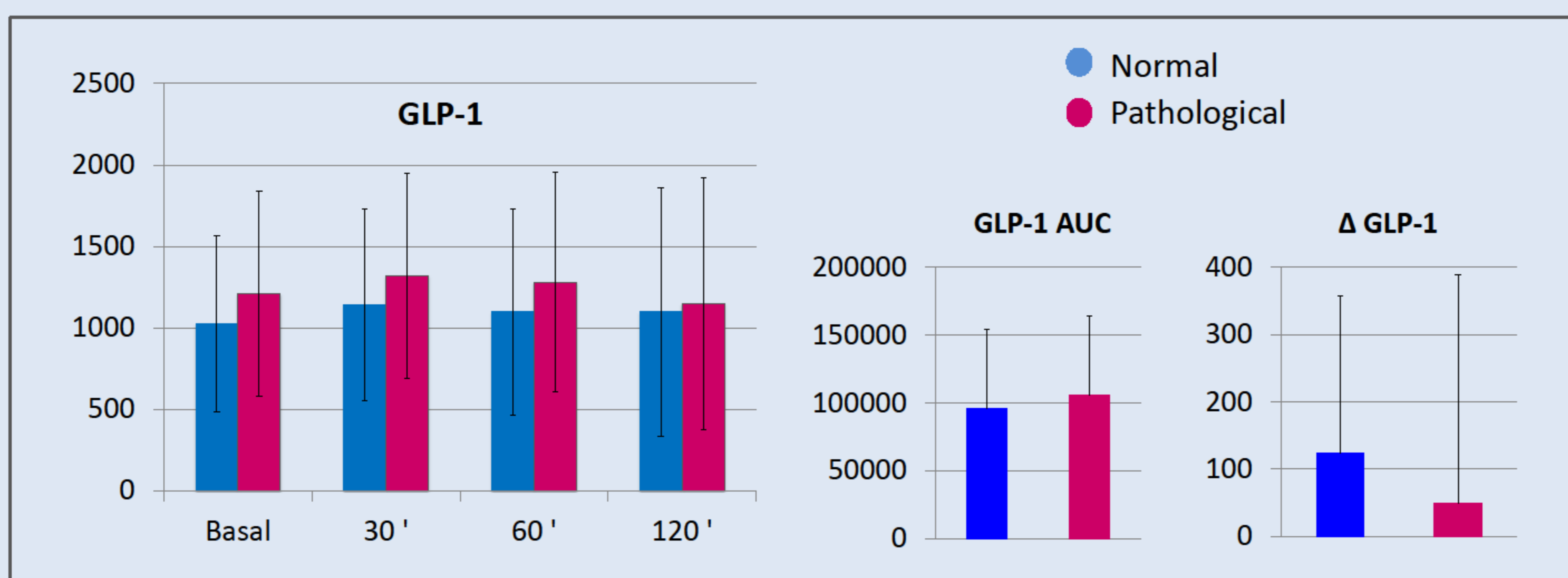
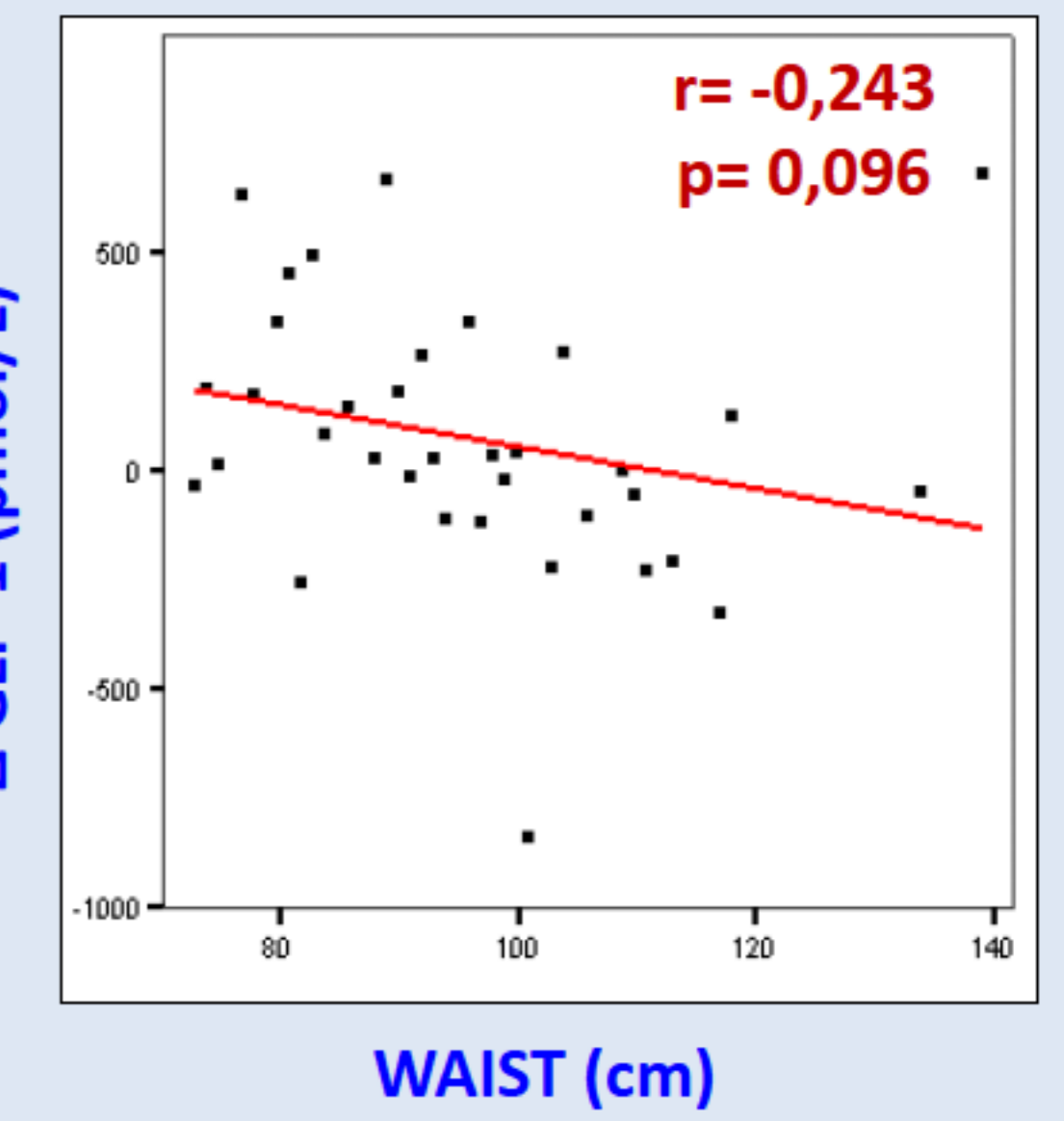
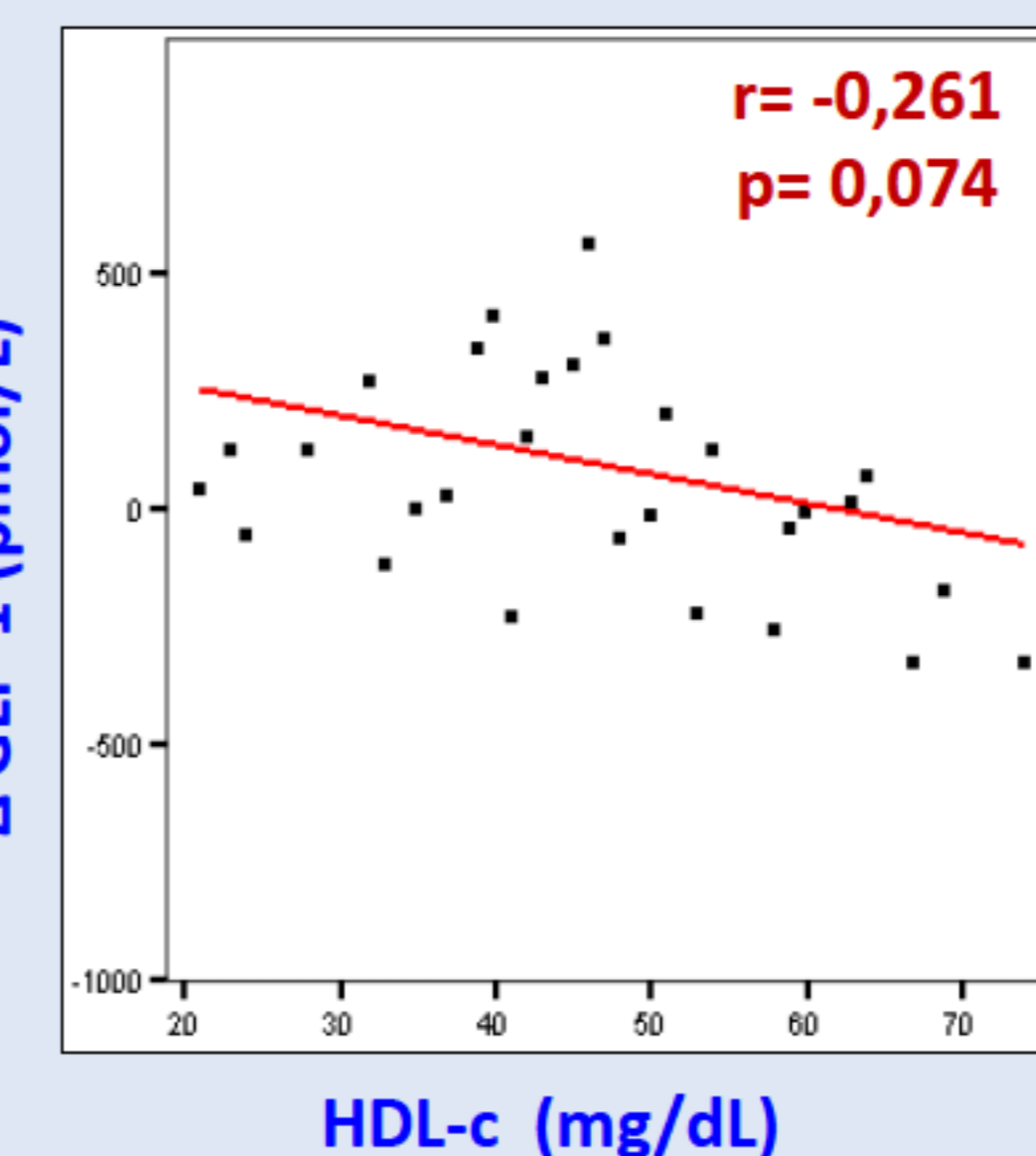
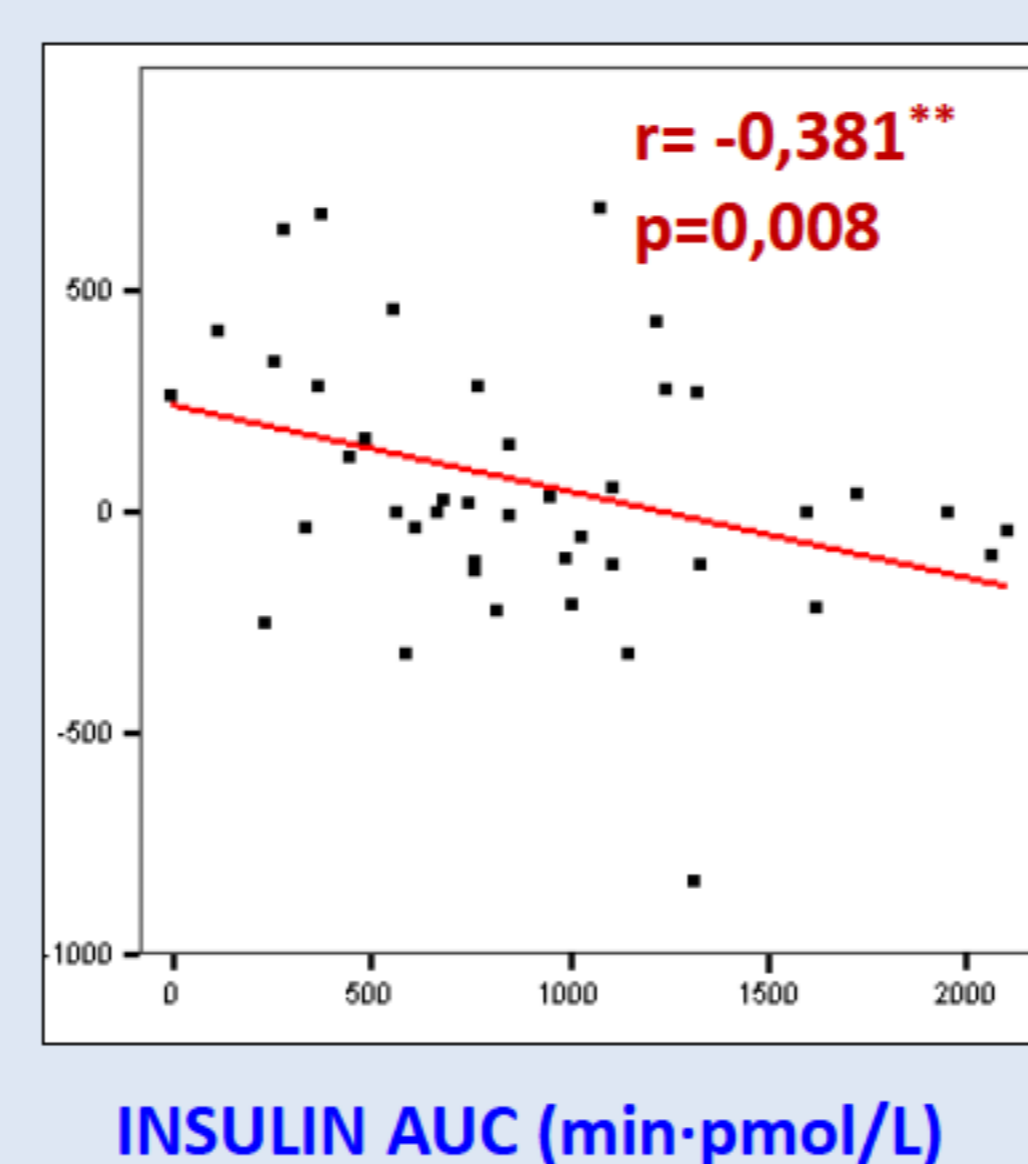
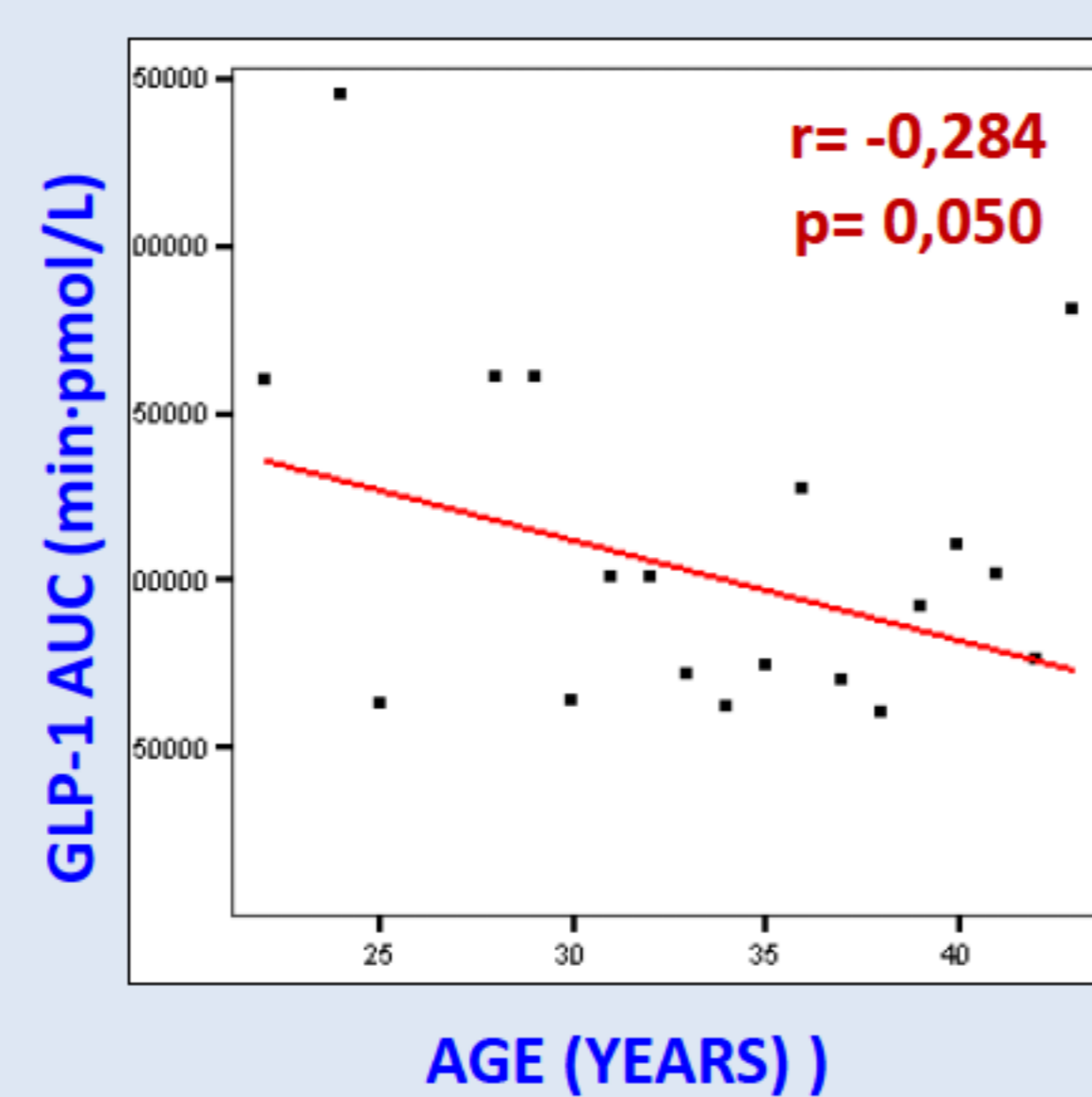
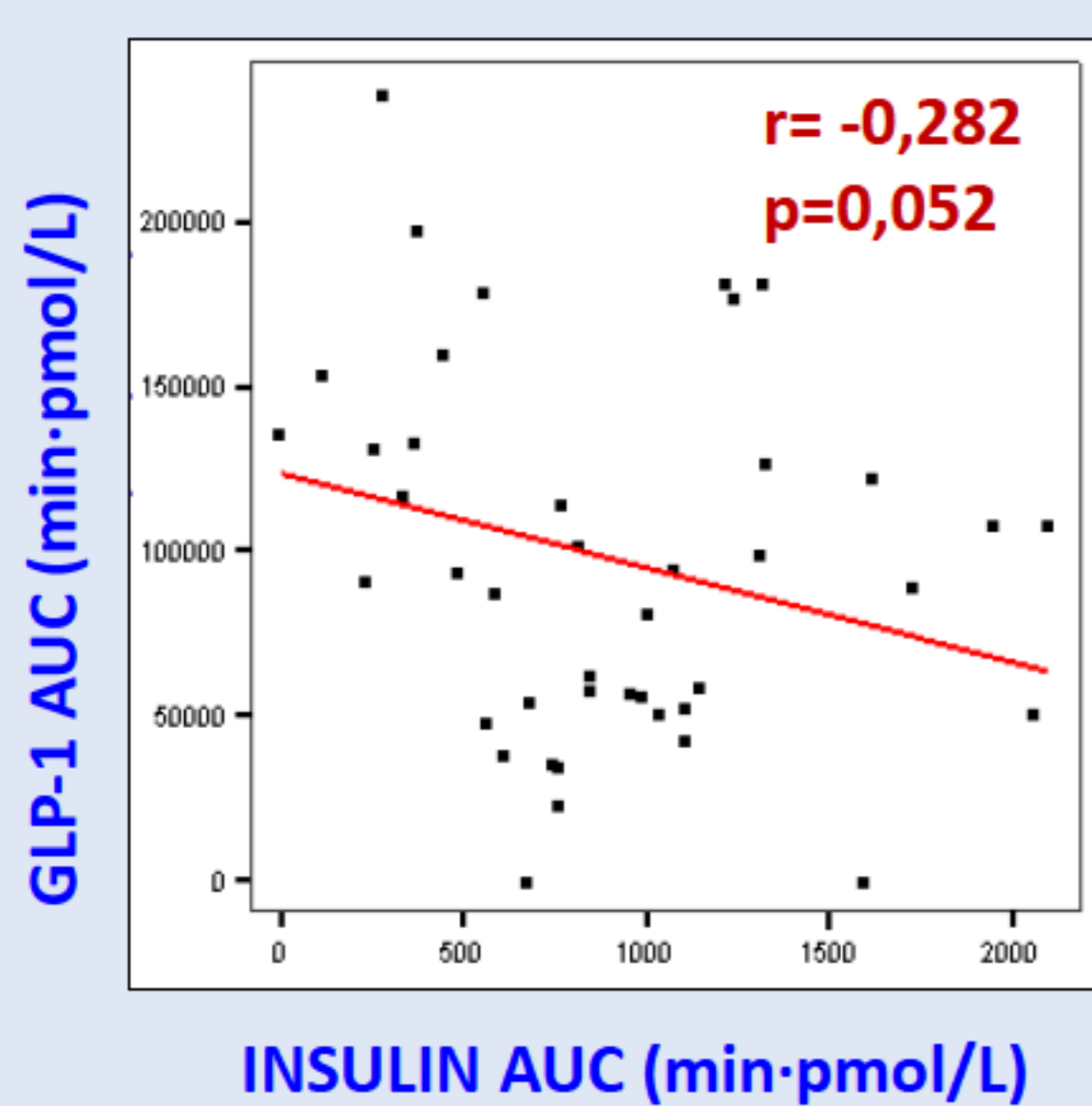
- 48 women with a history of GDM were assessed one year after childbirth determining clinical and analytical characteristics and OGTT with 75g.
- We measured glucose, insulin and GLP-1 (baseline, 30', 60', 120'). Women were classified according to the results of OGTT as healthy and prediabetic/diabetic patients.
- A general descriptive analysis, Mann-Whitney test, bivariate correlations for quantitative variables (Pearson) and multiple linear regression analysis were performed. The area under the curve (AUC) was calculated using the method of Riemann.

## RESULTS

	TOTAL (n=48)
<b>A year after delivery</b>	
Age (years)	35,04 ± 4,9
BMI (kg/m <sup>2</sup> )	29,76 ± 6,5
Waist (cm)	94,3 ± 14,8
Δ BMI (kg/m <sup>2</sup> )	0,39 ± 2,4
SBP (mmHg)	117,8 ± 12,3
DBP (mmHg)	77,2±9,5

	NORMAL OGTT (n=23)	PATHOLOGICAL OGTT (n=25)	p
HbA1c (%)	5,32±0,33	5,61±0,39	0,018*
HOMA-IR	1,6±0,8	2,8±1,6	0,002*
Cholesterol (mg/dL)	160,35±32,25	174,24±30,16	0,099
HDL-c (mg/dL)	47,52±11,44	49,68±13,21	0,642
LDL-c (mg/dL)	97,93±26,9	102,79±20,78	0,302
TGs (mg/dL)	79,35±31,7	110,28±57,03	0,076

	NORMAL OGTT (n=23)	PATHOLOGICAL OGTT (n=25)	p
	Mean (SD)	Mean (SD)	
Glucose 0'	90,61±8,58	107,36±18,39	0,000*
Glucose 30'	158,72±24,88	172,71±25,30	0,058
Glucose 60'	174,94±34,33	186,00±38,63	0,576
Glucose 120'	111,57±16,09	159,76±46,19	0,000*
OGTT AUC	10.263±5.743	14.165±3.728	0,007*
Insulin 0'	7,34±3,94	10,96±5,96	0,021*
Insulin 30'	56,65±26,19	56,22±41,20	0,791
Insulin 60'	89,41±73,91	76,20±47,04	0,839
Insulin 120'	56,36±31,97	100,8±59,2	0,002*
Insulin AUC	672,8±605,0	903,8±529,0	0,077



## CONCLUSIONS

- Women with GDM history and prediabetes/diabetes diagnosis in postpartum reassessment, do not differ in GLP-1 secretion after OGTT compared to healthy subjects.
- The parameters related to GLP-1 response in postpartum OGTT are BMI, triglycerides, HDL-C and insulin AUC.

Predictive independent variables	Dependent variables			
	Beta	p	Beta	p
	<b>GLP-1 AUC (pmol/L)</b> r = 0,308 r <sup>2</sup> = 0,095		<b>ΔGLP-1 (pmol/L)</b> r = 0,749 r <sup>2</sup> = 0,488	
Age	-0,243	0,099	-0,013	0,910
Waist	-1,72	0,269	-0,257	0,155
BMI	-1,92	0,208	-0,661	0,000**
SBP	-0,015	0,921	0,020	0,670
DBP	0,143	0,334	0,087	0,468
OGTT AUC	-0,03	0,871	-0,056	0,401
TGs	0,171	0,248	0,460	0,016*
HDL-c	-1,83	0,614	-5,921	0,018*
HOMA-IR	0,138	0,383	0,089	0,572
HOMA-β	-0,04	0,787	0,000	0,897
Insulin AUC	-0,308	0,039*	-0,387	0,024*

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