

Różnice w zdrowiu w populacji Polski
29 września – 1 października 2011
Warszawa

Health differences in Polish population
29 September – 1 October 2011
Warsaw, Poland

Prevalence of diabetes and IFG

– baseline assessment

from prospective cohort study PONS

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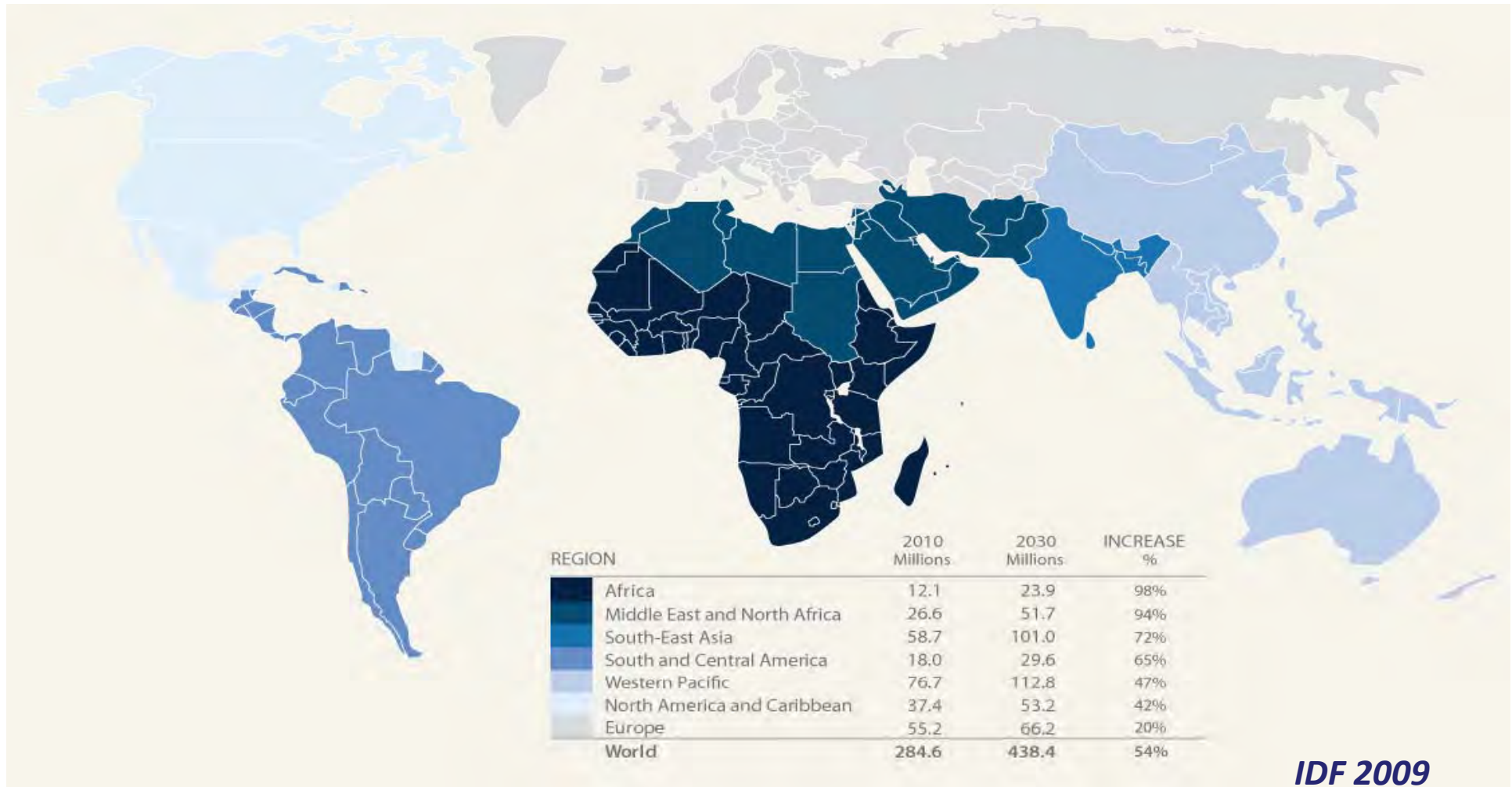
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Diabetes - prevalence and projections - world

	2010	2030
Total world population (billions)	7.0	8.4
Adult population (age 20-79; billions)	4.3	5.6
World Diabetes and IGT (20-79 age group)		
Diabetes		
Comparative prevalence (%)	6.4	7.7
Number of people with diabetes (millions)	285	439
IGT		
Comparative prevalence (%)	7.8	8.4
Number of people with IGT (millions)	344	472

Diabetes - prevalence and projections - world



PONS study population

- Overall, 3862 men and women (1290 men and 2572 women) aged 45 to 64 years from świętokrzyskie voivodeship enrolled in the study:
 - 1182 rural inhabitants (396 men and 786 women)
 - 2680 urban inhabitants (894 men and 1786 women)

- Mean (SD) age in studied group:
 - Men 55.8 (5.4) y.o., Women 55.5 (5.3) y.o.
 - Urban 56.1 (5.2) y.o., Rural 54.3 (5.3) y.o.

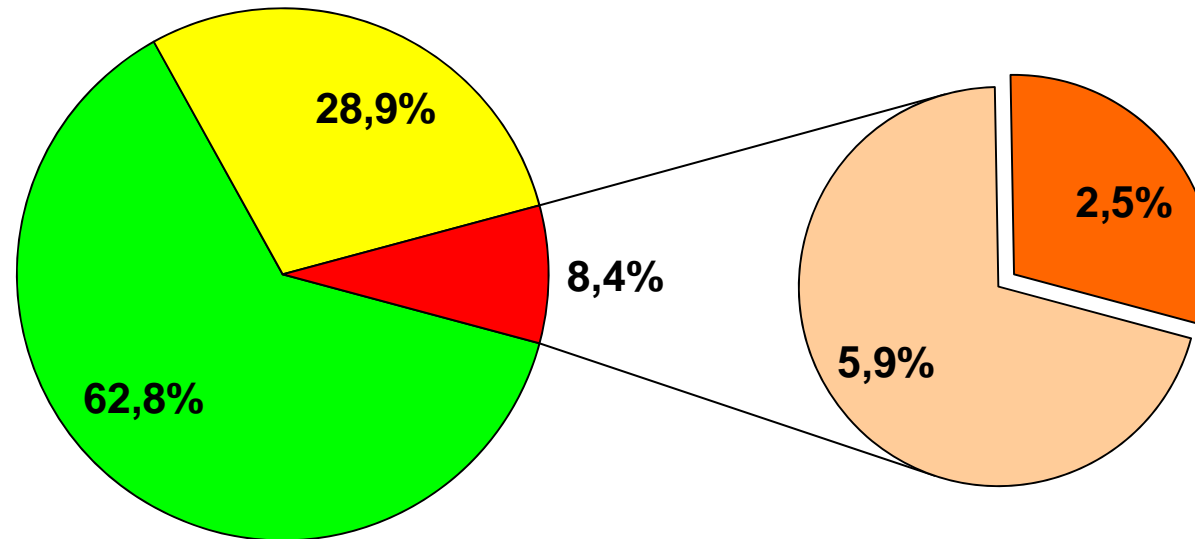
Material and methods

- **IFG (impaired fasting glucose)** 100 mg% – 125 mg%
- **Diabetes** - diabetes in interview and fasting glucose ≥ 126 mg%
- **Known diabetes** - diabetes in interview
- **Unknown diabetes** - fasting glucose ≥ 126 mg%

Blood glucose level in the study group

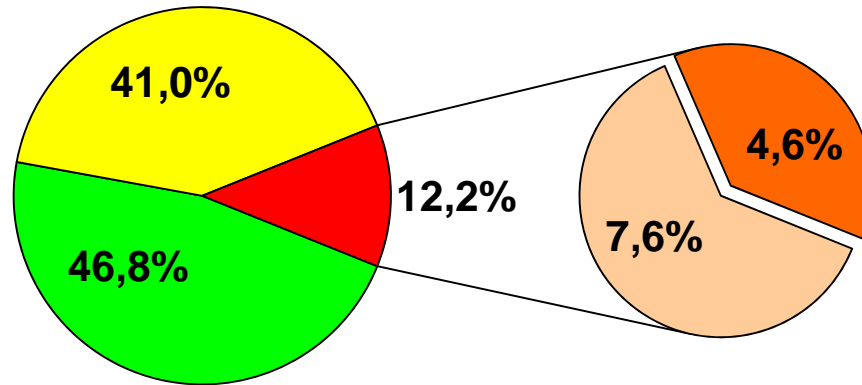
		N	Glucose [mg%]			p
			Mean	SD	Median	
Gender	Men	1289	104.8	24.7	100.0	<0.001
	Women	2570	97.0	21.5	93.2	
Age	45-54	1586	96.4	17.3	94.0	<0.001
	55-64	2273	101.9	25.9	97.0	
Area	Rural	1180	99.5	26.1	95.0	0.0647
	Urban	2679	99.7	21.4	96.0	
Education level	Primary	230	106.4	36.7	98.0	<0.001
	Trade	687	104.0	34.3	97.0	
	Secondary	1707	98.8	17.9	96.0	
	University	1235	97.2	16.5	94.6	
Total		3859	99.6	22.9	96.0	

Distribution of diabetes in the study group

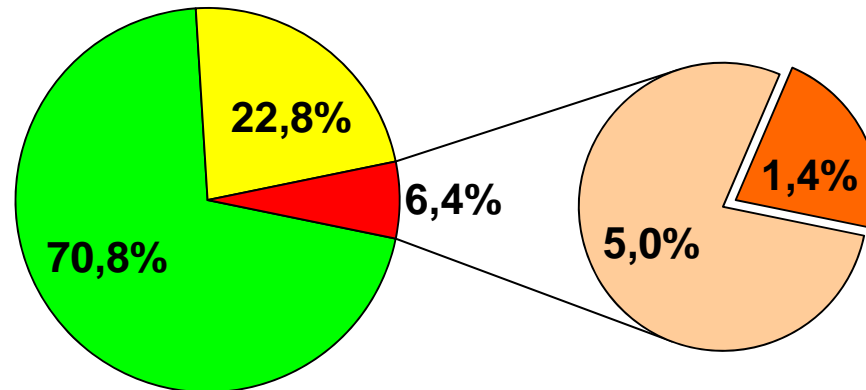


■ normal ■ IFG ■ with diabetes in interview ■ without diabetes in interview ■ diabetes

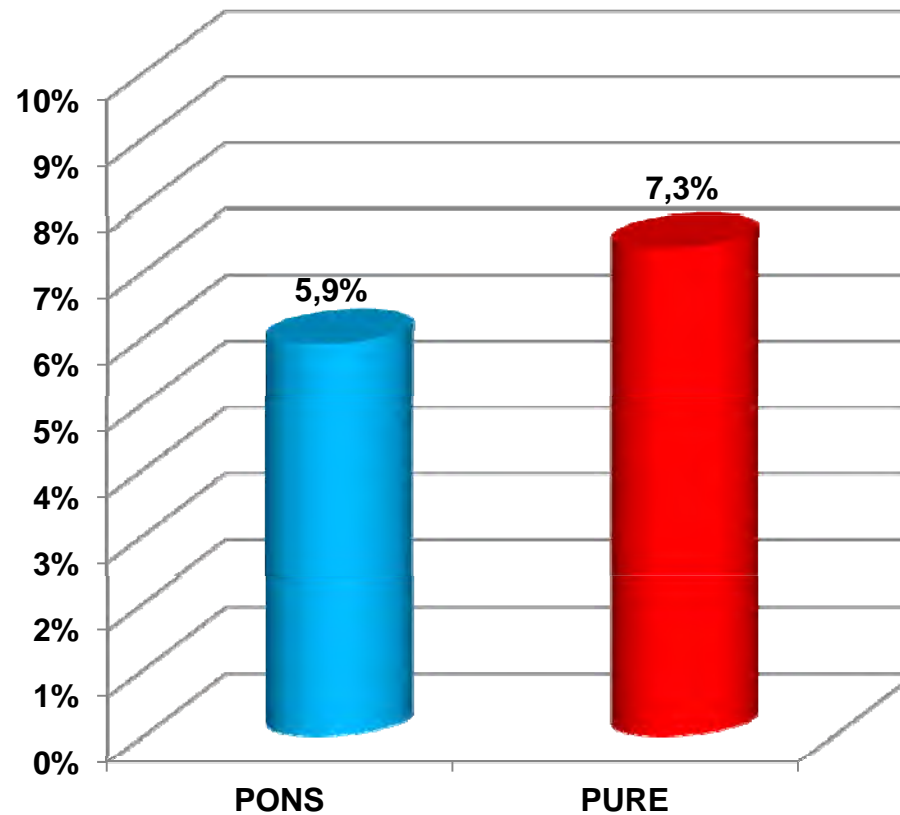
Distribution of diabetes in men



Distribution of diabetes in women



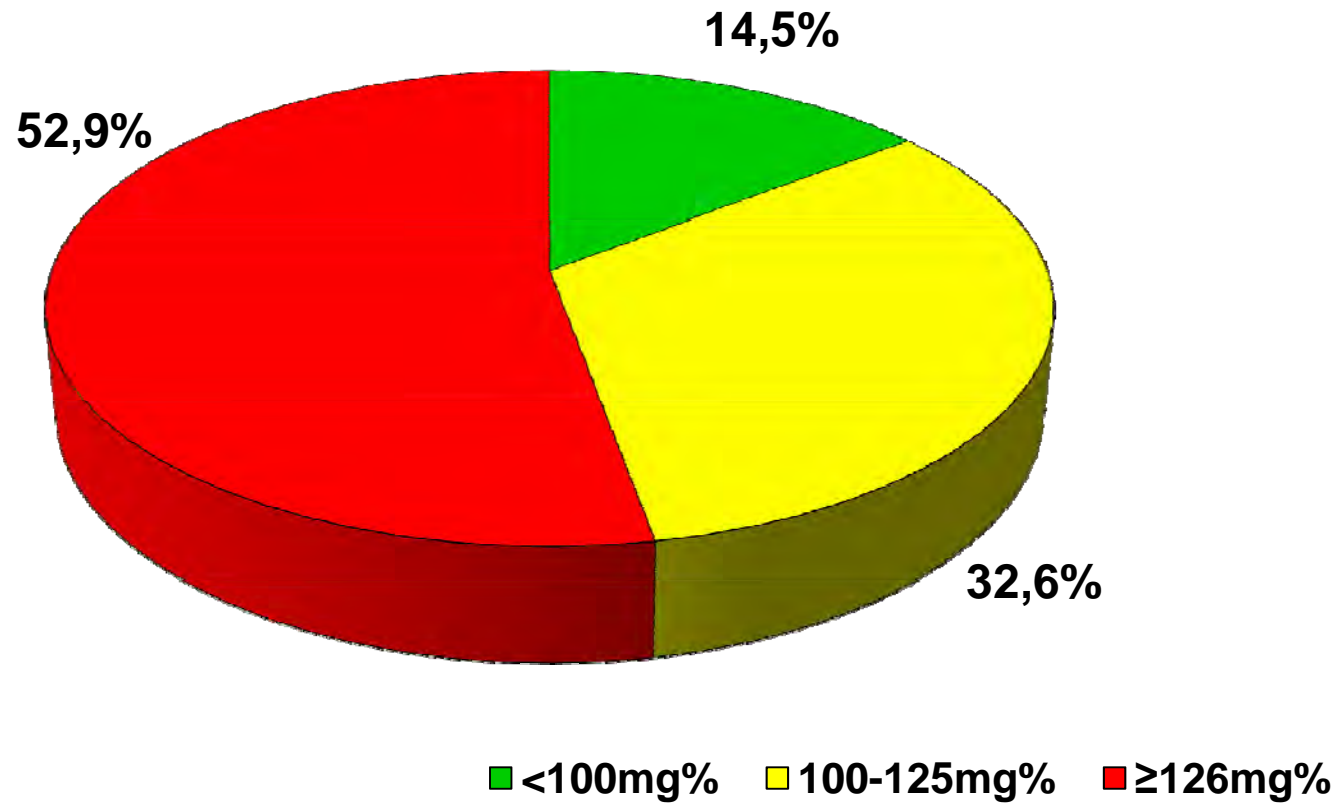
Comparing percentage of known diabetes between PONS and PURE studies



Blood glucose level in participant with diabetes (known diabetes or/and blood glucose level $\geq 126\text{mg}\%$)

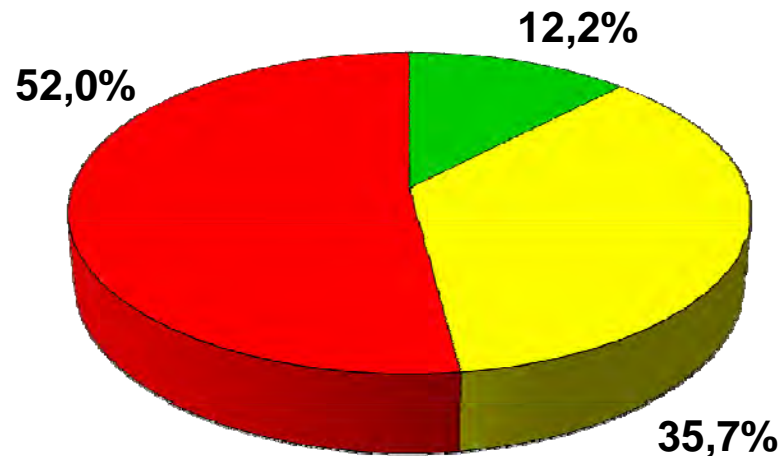
		N	Glucose [mg%]			p
			Mean	SD	Median	
Gender	Men	158	144.3	50.5	133.2	0.2715
	Women	165	144.3	58.6	129.1	
Age	45-54	74	138.0	51.5	128.2	0.0785
	55-64	249	146.1	55.6	133.0	
Area	Rural	89	152.4	69.3	133.0	0.4930
	Urban	234	141.1	47.9	131.3	
Education level	Primary	41	156.1	64.1	135.0	0.1372
	Trade	89	155.3	73.4	133.5	
	Secondary	118	137.2	40.9	131.3	
	University	75	135.8	37.2	129.0	
Total		323	144.3	54.7	131.3	

Distribution of blood glucose level in patients with known diabetes



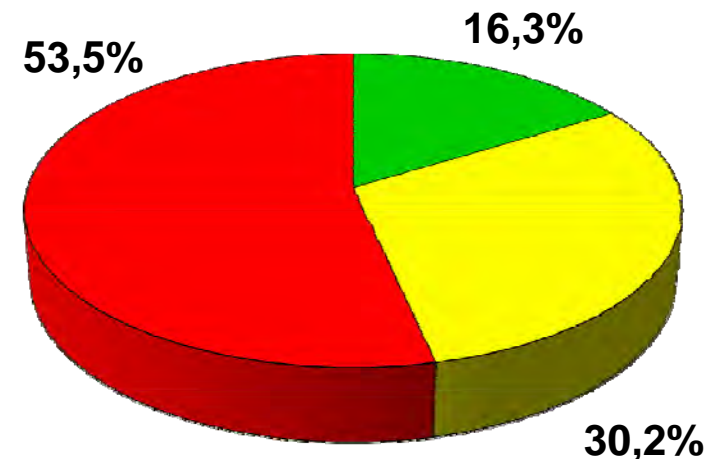
Distribution of blood glucose level in men and women with known diabetes

Distribution of blood glucose level in men with known diabetes



■ <100mg%
 ■ 100-125mg%
 ■ ≥126mg%

Distribution of blood glucose level in women with known diabetes



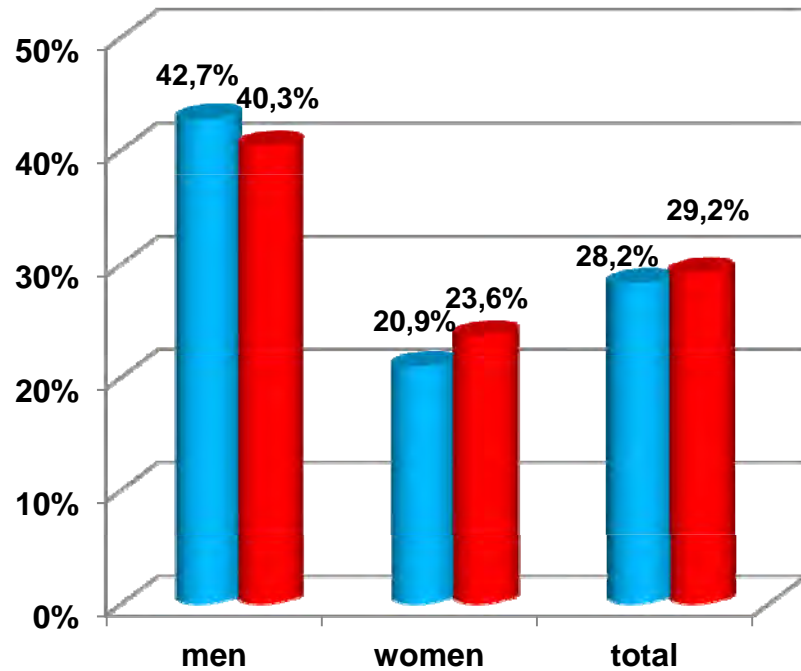
■ <100mg%
 ■ 100-125mg%
 ■ ≥126mg%

Comparing blood glucose level between participants with known and unknown diabetes

		Glucose [mg%] in participants with know diabetes		Glucose [mg%] in participants with unknown diabetes		p
		N	Mean	N	Mean	
Gender	Men	98	143.6	59	142.5	<0.001
	Women	129	145.0	36	141.4	<0.001
Age	45-54	40	131.7	33	140.4	<0.001
	55-64	187	147.1	62	143.0	<0.001
Area	Rural	68	156.5	21	139.4	<0.001
	Urban	159	139.3	74	142.9	<0.001
Education level	Primary	36	160.0	5	128.1	<0.001
	Trade	60	161.5	29	142.6	<0.001
	Secondary	85	134.5	33	144.3	<0.001
	University	46	128.5	28	141.5	<0.001
Total		227	144.4	95	142.1	

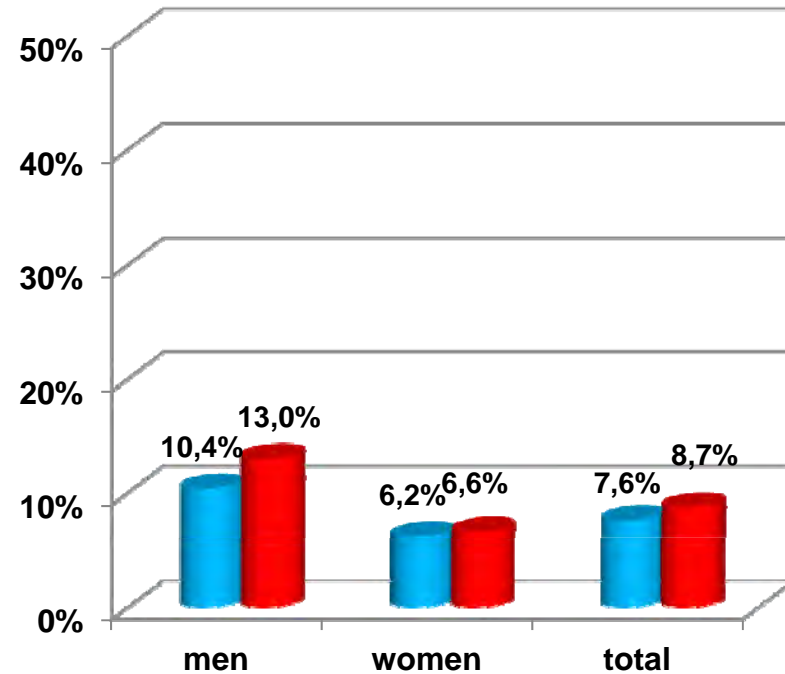
IFG and diabetes in study group by place of residence

100-125mg%



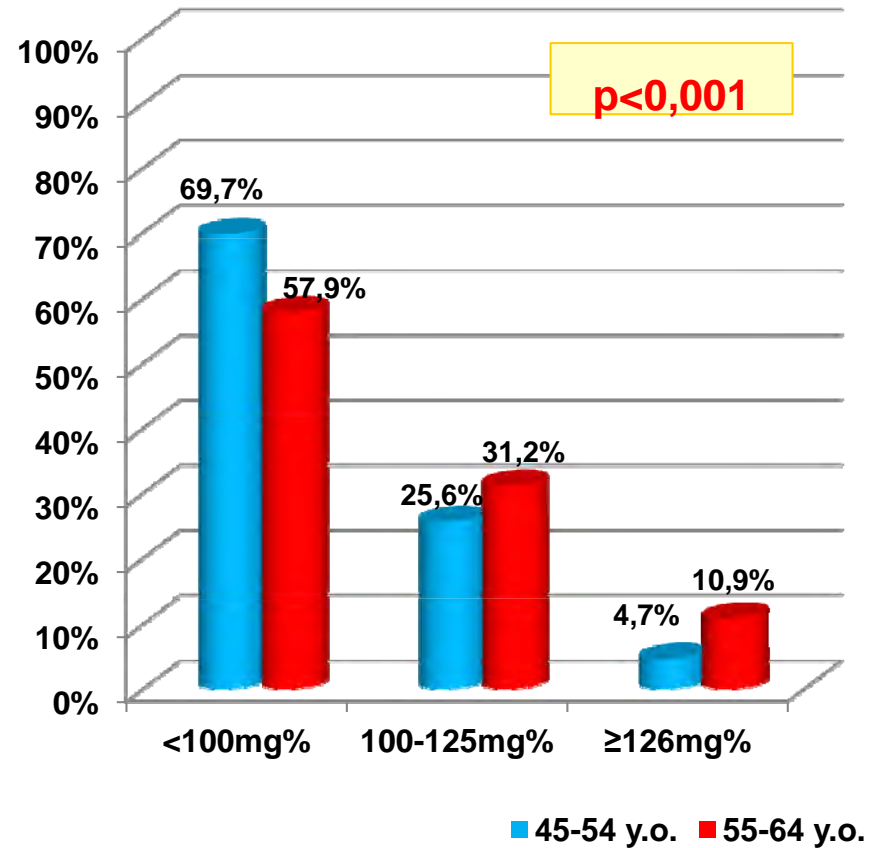
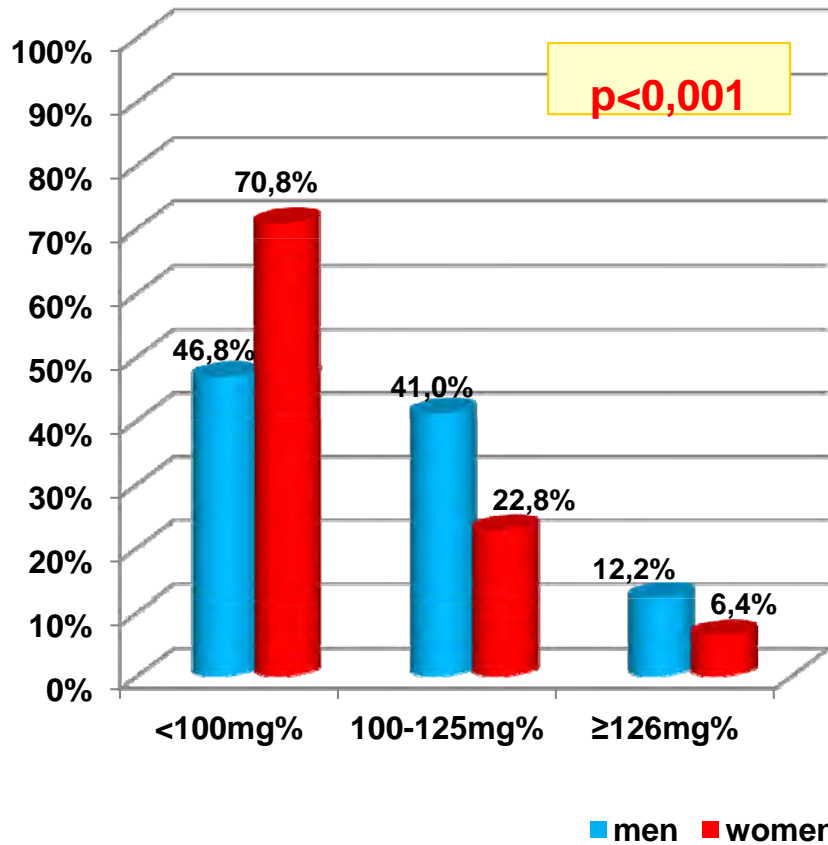
■ rural ■ urban

≥126mg%

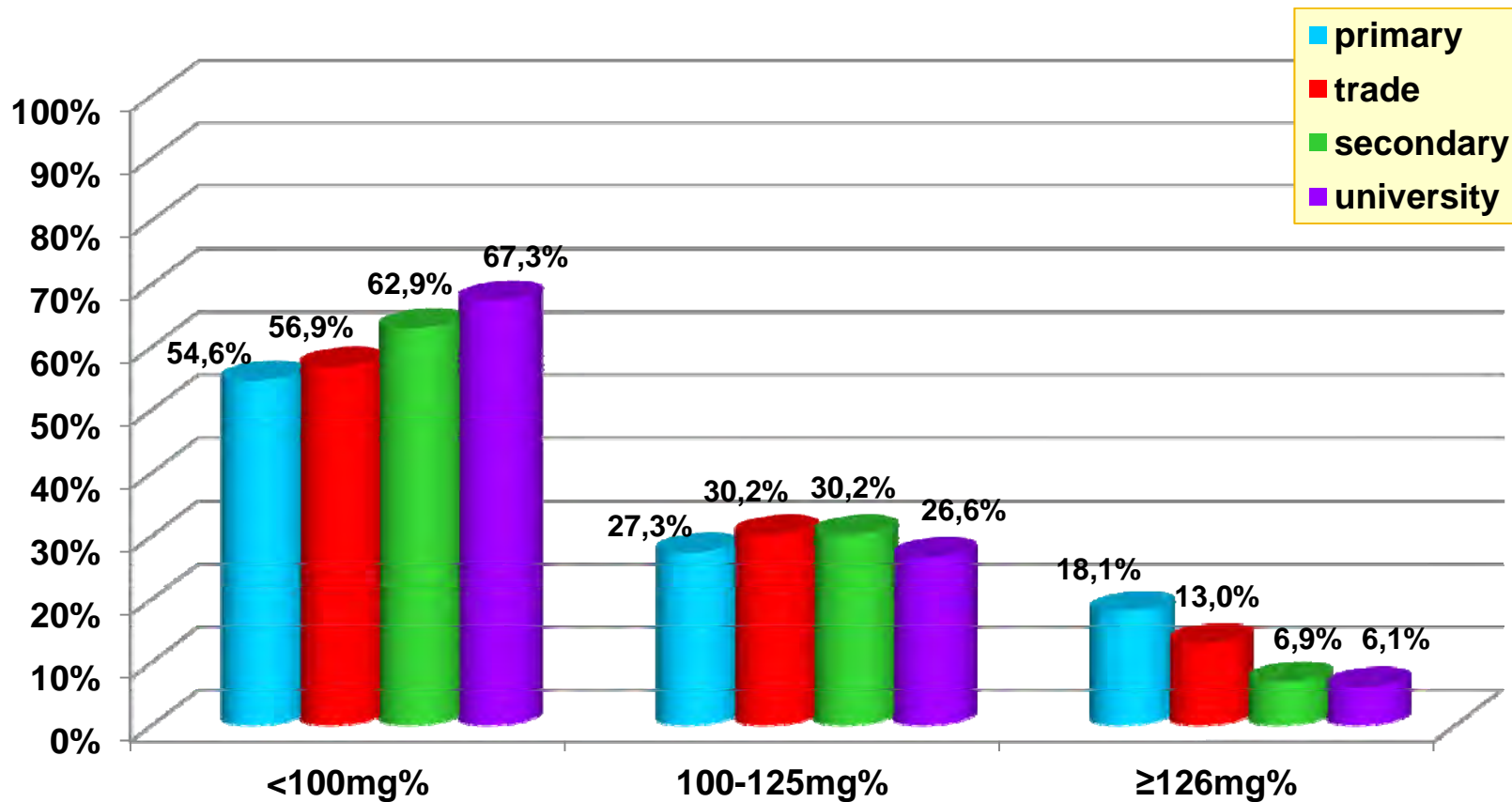


■ rural ■ urban

IGF and diabetes in the study group by gender and age

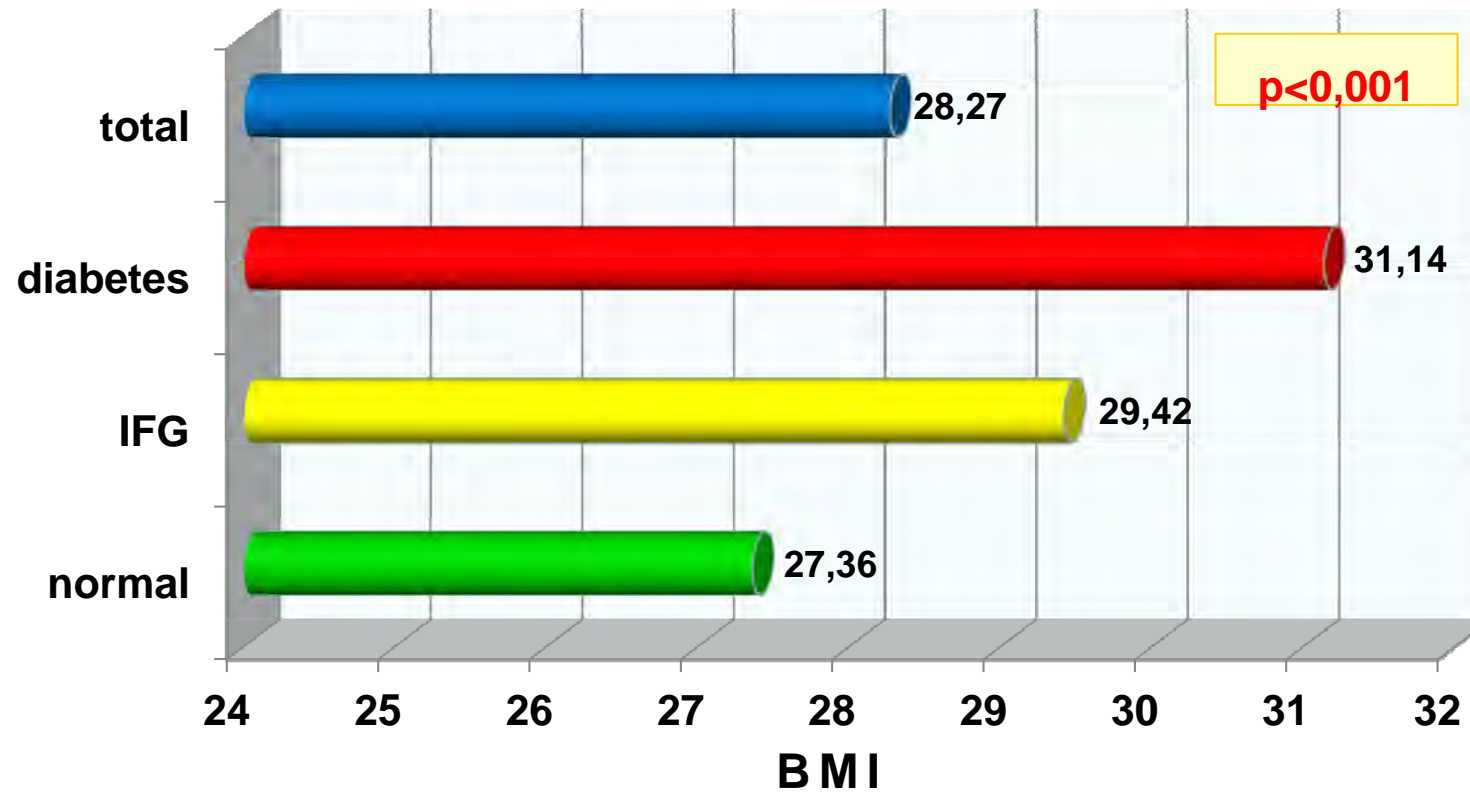


IFG and diabetes in the study group by level of education



p<0,001

Correlation between diabetes and BMI



Association between obesity (BMI and waist) and risk of diabetes

	BMI (normal weight/overweight/obesity)	Waist circumference (Men < 94 cm and ≥94 cm; Women <80 cm and ≥80 cm)
IFG	OR = 1.72 95% CI = 1.55 – 1.90	OR = 2.39 95% CI = 2.01 – 2.85
Diabetes	OR = 2.40 95% CI = 2.00 – 2.88	OR = 2.61 95% CI = 1.89 – 3.61
IFG+diabetes	OR = 2.12 95% CI = 1.93 – 2.34	OR = 2.82 95% CI = 2.39 – 3.31

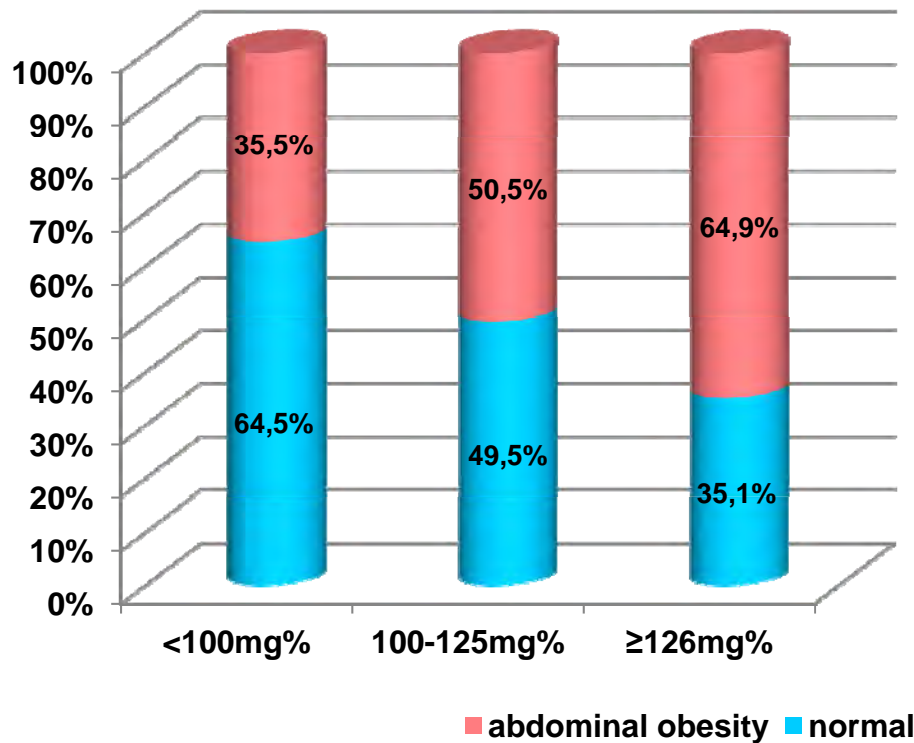
Logistic regression

OR – odds ratio

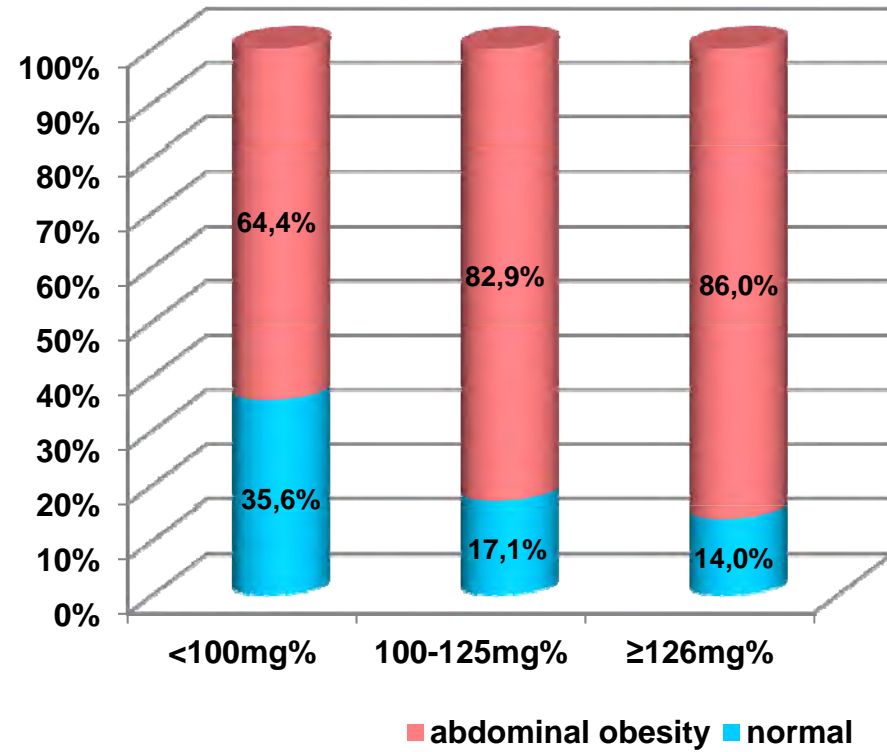
95% CI - confidence interval

Correlation between diabetes and abdominal obesity

Diabetes and abdominal obesity
 (Waist: Men ≥ 102 cm; Women ≥ 88 cm)

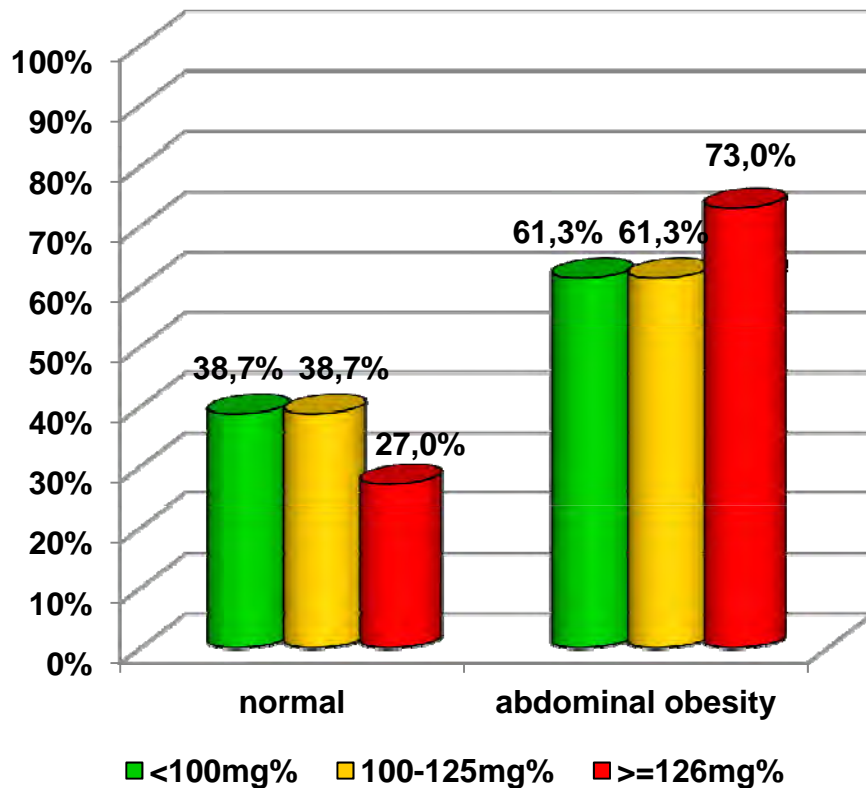


Diabetes and abdominal obesity
 (Waist: Men ≥ 94 cm; Women ≥ 80 cm)

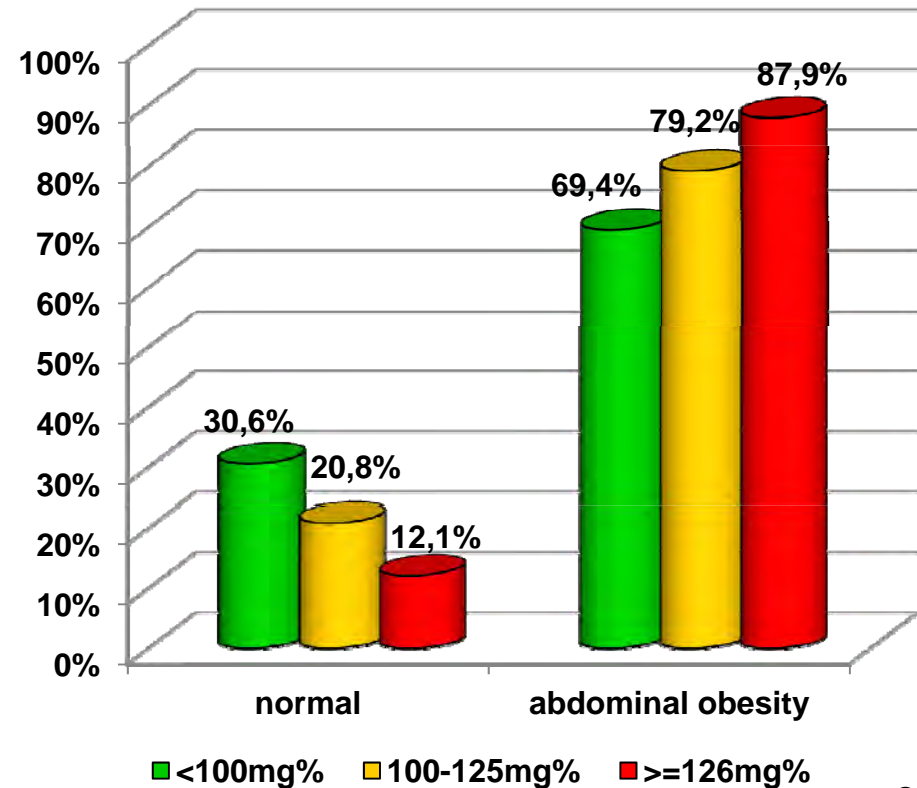


Correlation between diabetes and abdominal obesity

Diabetes and abdominal obesity
 (WHR: Men >1.0; Women >0.8)



Diabetes and abdominal obesity
 (WHR: Men >0.94; Women >0.8)



Conclusions

- Prevalence of diabetes in the study group was high
- Significant percentage of participants had no awareness about diabetes
- More than half of patients with diabetes were not well controlled