

The role of insulin, IGF-1BP-3, folic acid, 25-OH-D, CA 19-9 and CA 72-4 as potential tumor's predictors of the gastrointestinal tract in patients with acromegaly

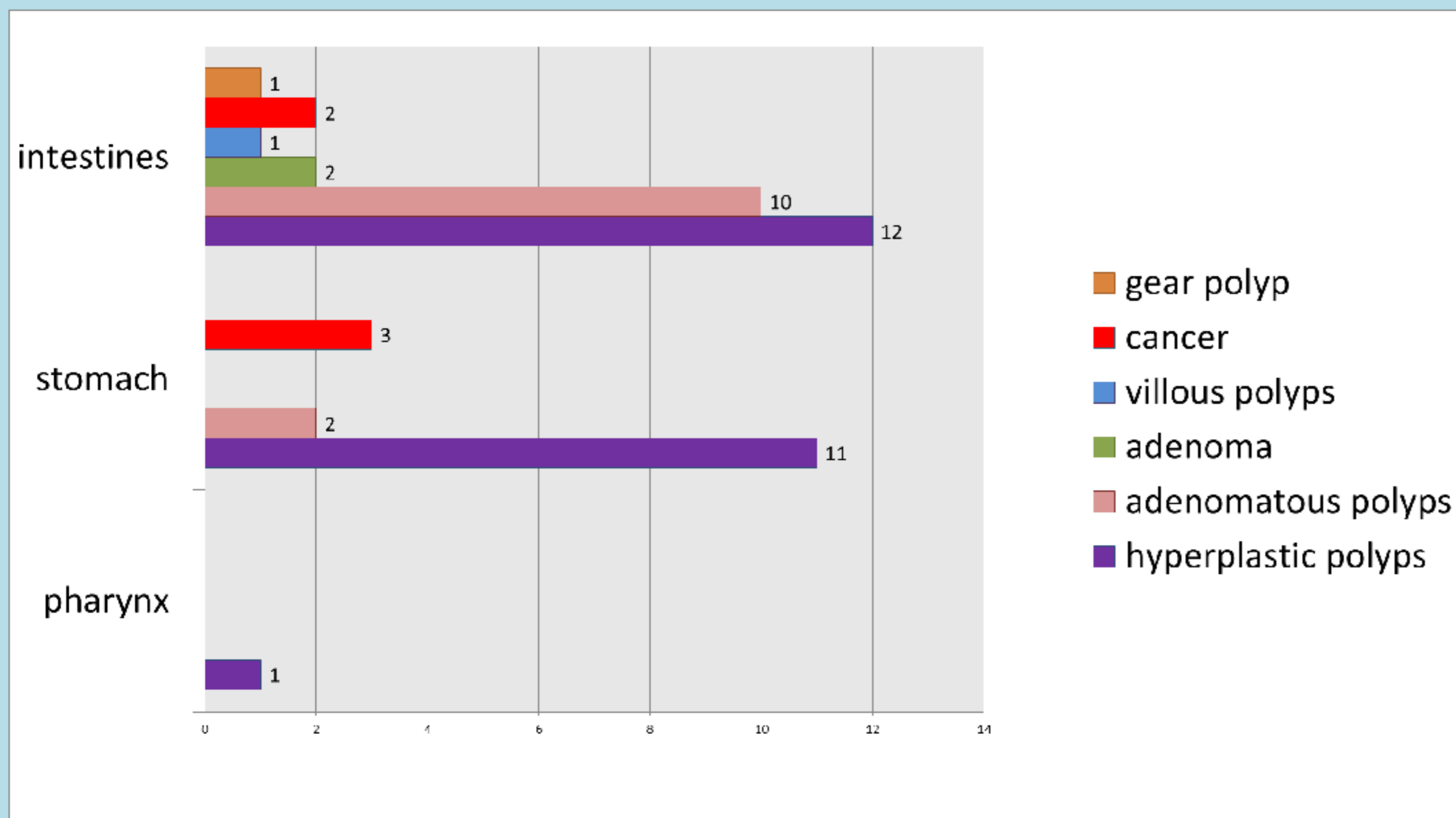
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Patients with acromegaly have increased risk of developing tumors of the gastrointestinal tract. There are some data that IRI, IGF-1BP3, folic acid and vitamin D may influence the development of these tumors.

Aim: To study the influence of IRI, IGF-1BP3, folic acid, vitamin D, CA 19-9, CA 72-4 in the development of tumors of the gastrointestinal tract, and the frequency of neoplasms detection.

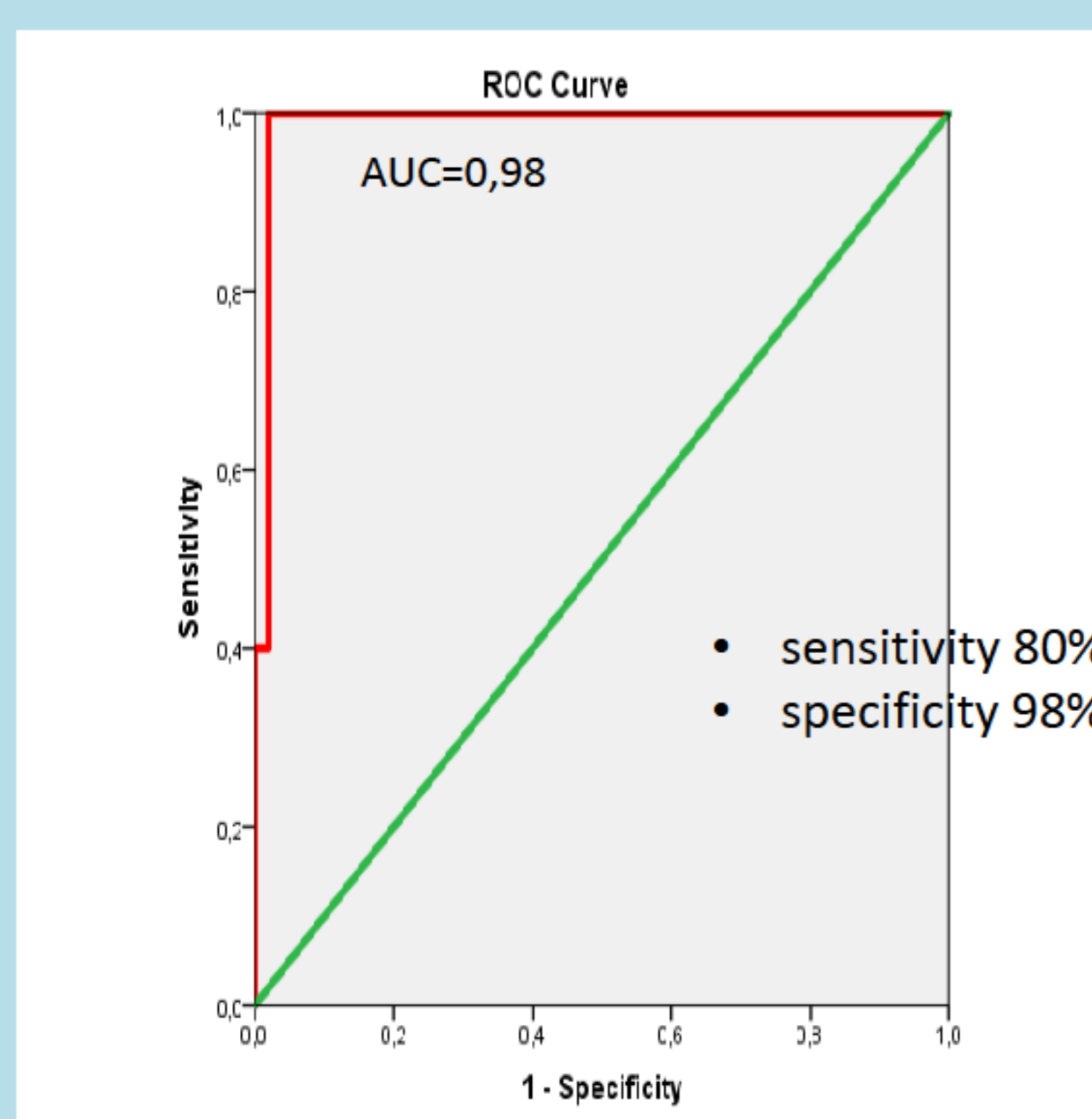
Materials and Methods: The study included 120 patients with acromegaly. All patients underwent gastroscopy and colonoscopy with biopsy of revealed tumors. The levels of neoplasms also were studied in all cases.

Histological examination



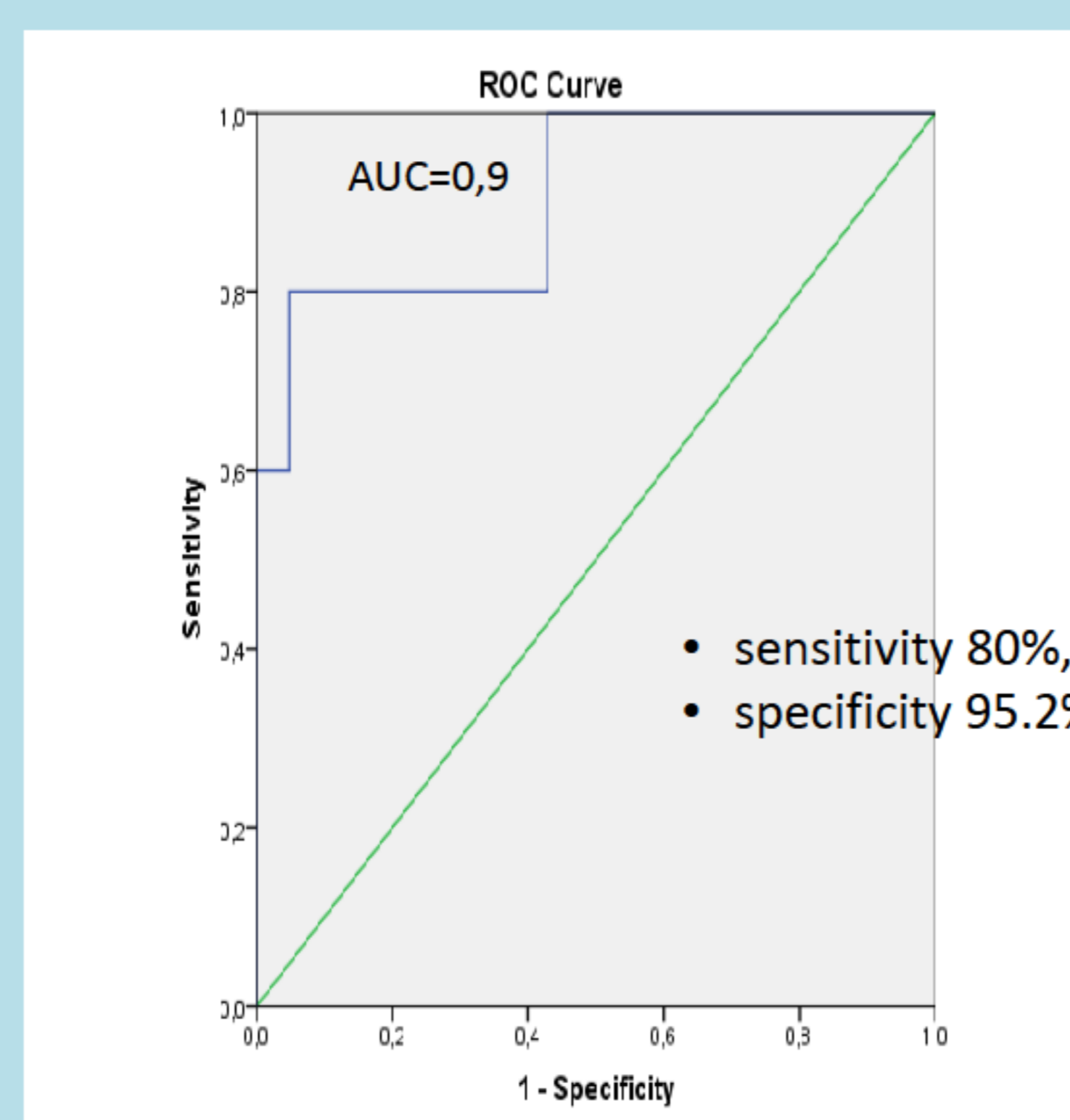
Neoplasms were found in 43 patients (35.8%). Histologically hyperplastic and adenomatous polyps (24/12), 2 patients had villous and tubulovesicular adenoma, gear polyp was found in 1 case, and 5 patients had cancer of stomach and colon. Thus, the frequency of malignant tumors was 4.2%.

ROC-analysis and Binary Logistic Regression



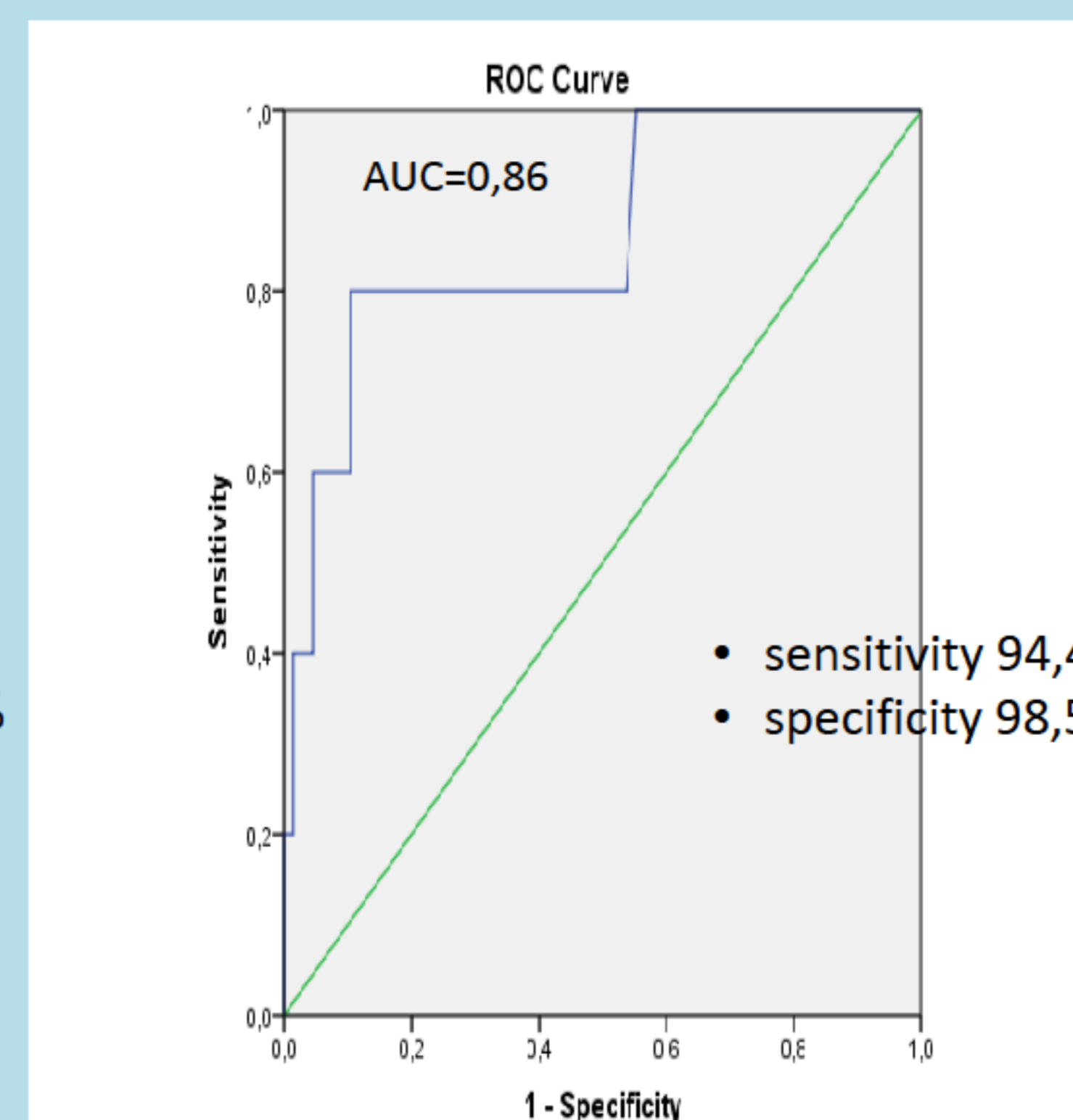
	B	p
IGF-1BP3	-0,158	0,009
Constant	1,387	0,007

The level of IGF-1BP3 ≥ 3510 mg/ml was also significantly increased the risk of malignancy



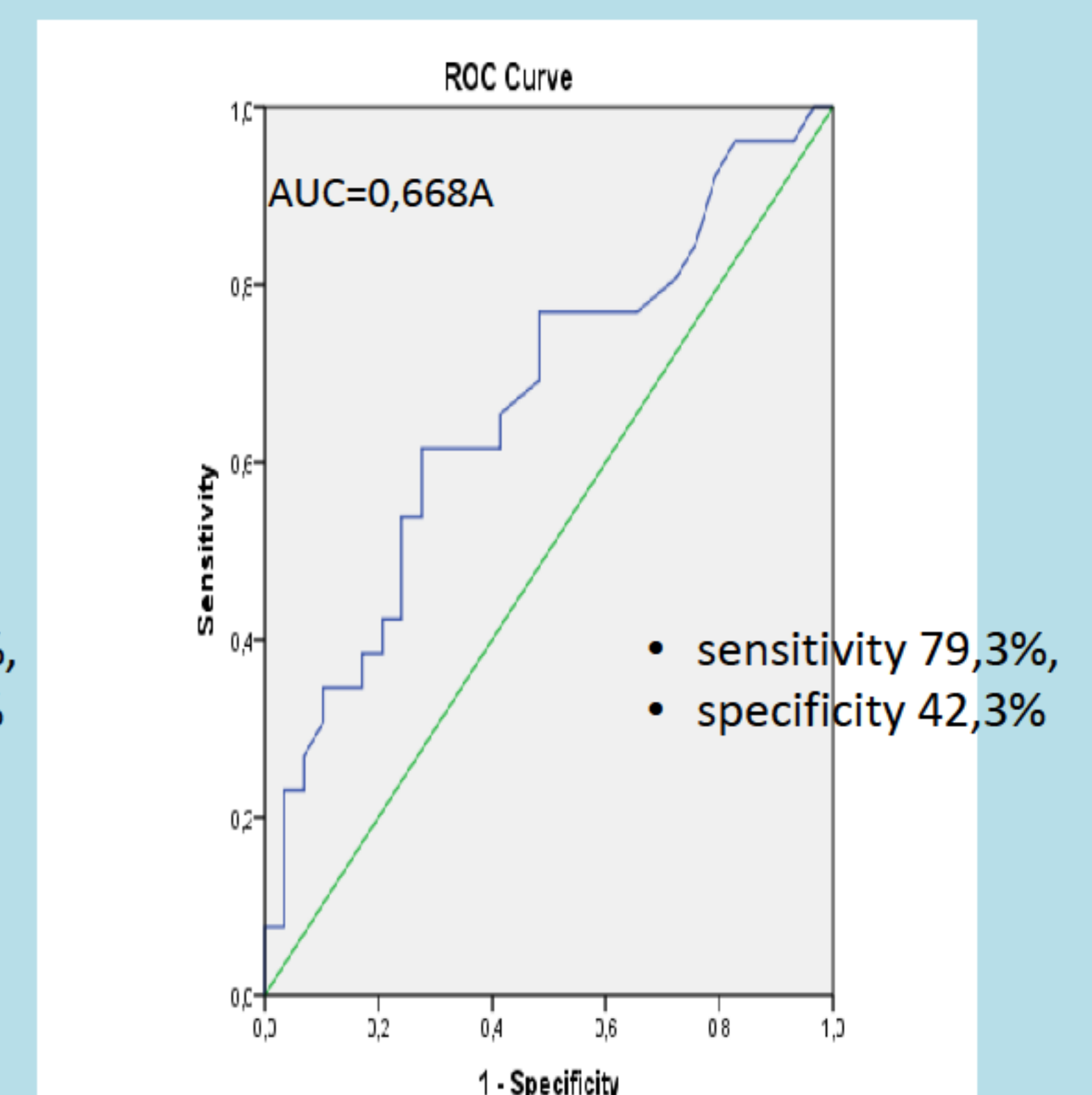
	B	P
Insulin	-0,158	0,022
Constant	1,387	0,006

The level of IRI more than 30,1 mU /ml and diagnosed neoplasm significantly increased risk of malignancy



	B	p
Insulin	-0,158	0,003
Constant	1,387	0,00

Insulin levels higher than 48,6 mU/ml lead to significantly increased risk of developing tumors.



	B	p
CA19-9	-0,158	0,038
Constant	1,387	0,036

The level of CA-19-9 $\leq 8,8$ U/L also increased the risk of tumors of the gastrointestinal tract in patients with acromegaly

Patients with tumors and without them were comparable by CA 72-4, folic acid and vitamin D levels.

Conclusions: Patients with acromegaly have the increased risk of neoplasms formation, including malignant tumors. Levels of IRI, IGF-1BP3 and CA 19-9 can be used as the diagnostic criteria of tumors of the gastrointestinal tract in patients with acromegaly.