

## The risk factors for developing primarily detected pulmonary tuberculosis requiring hospitalization

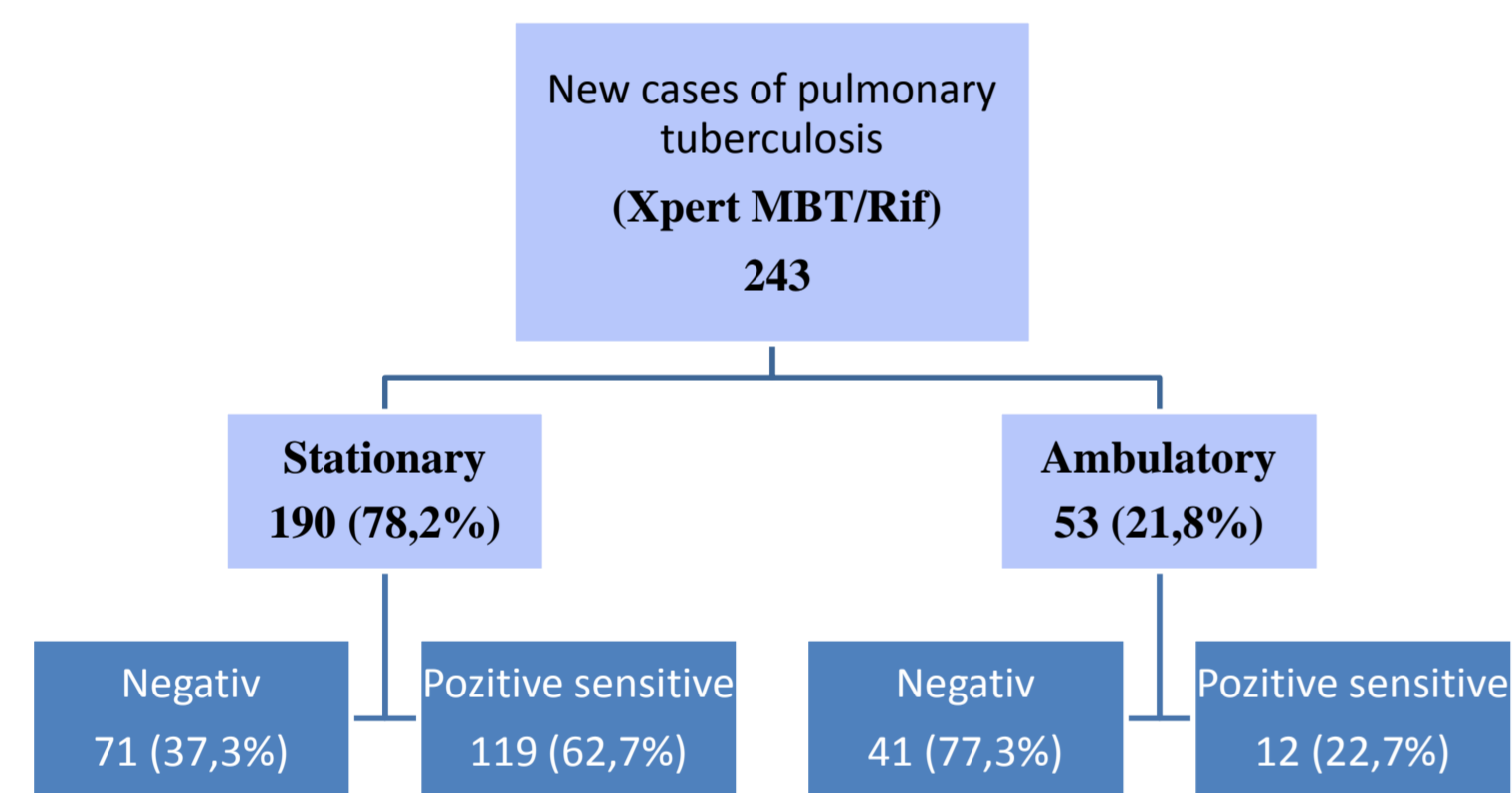
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### Introduction



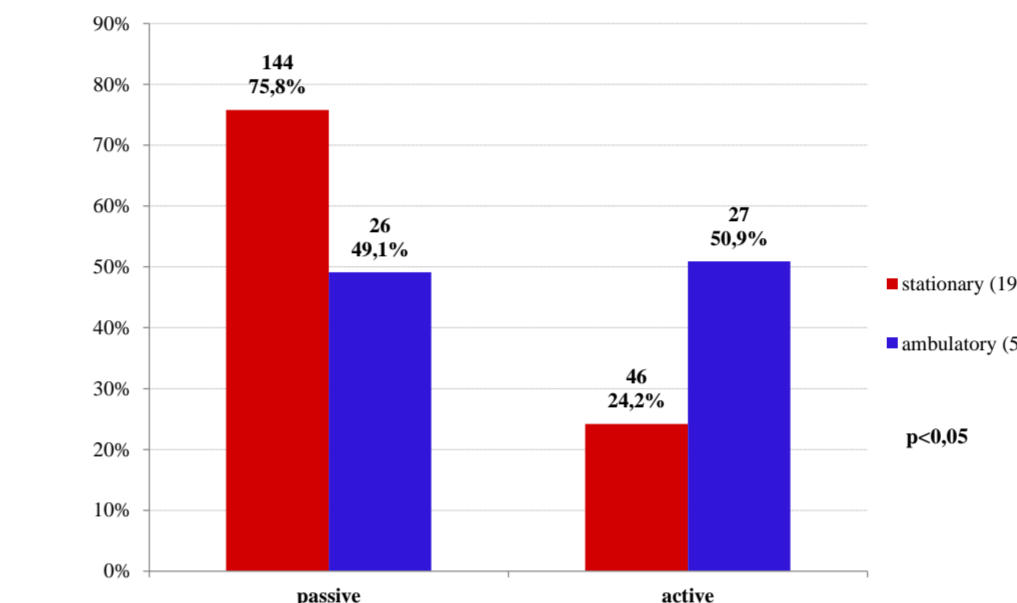
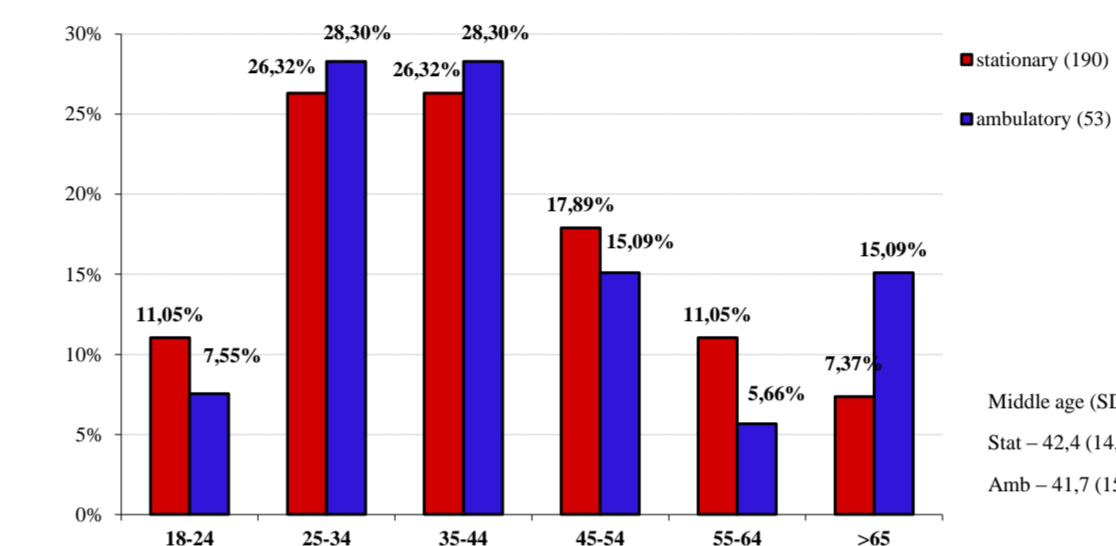
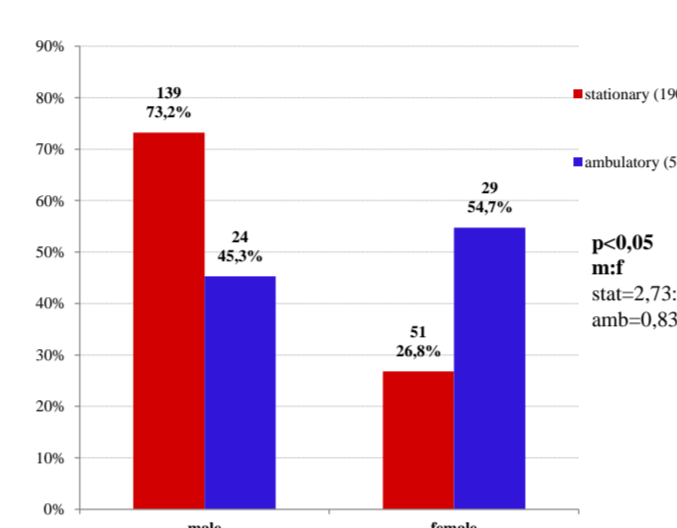
### Material and methods:



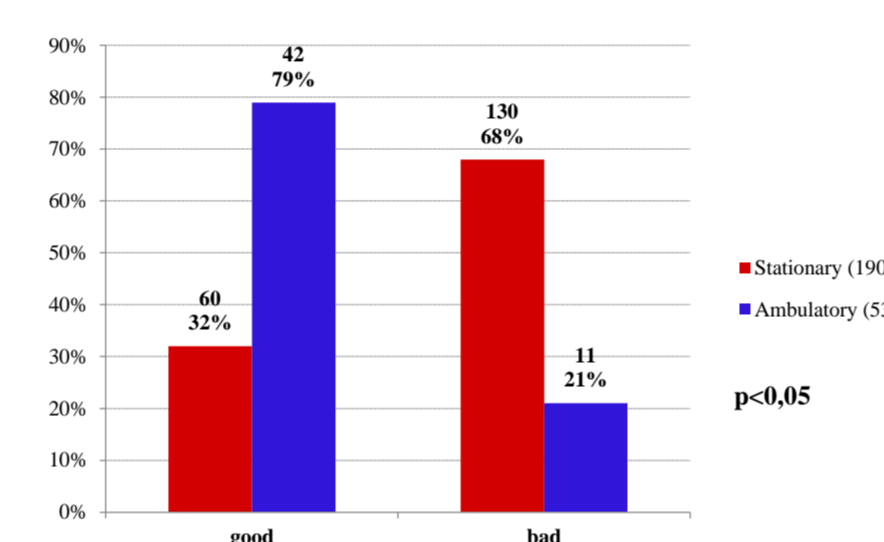
**Keywords:** TB, tuberculosis, risk factors

**Purpose:** studying the impact of risk factors and the effectiveness of treatment in patients with pulmonary tuberculosis, primarily screened, treated inpatient and outpatient

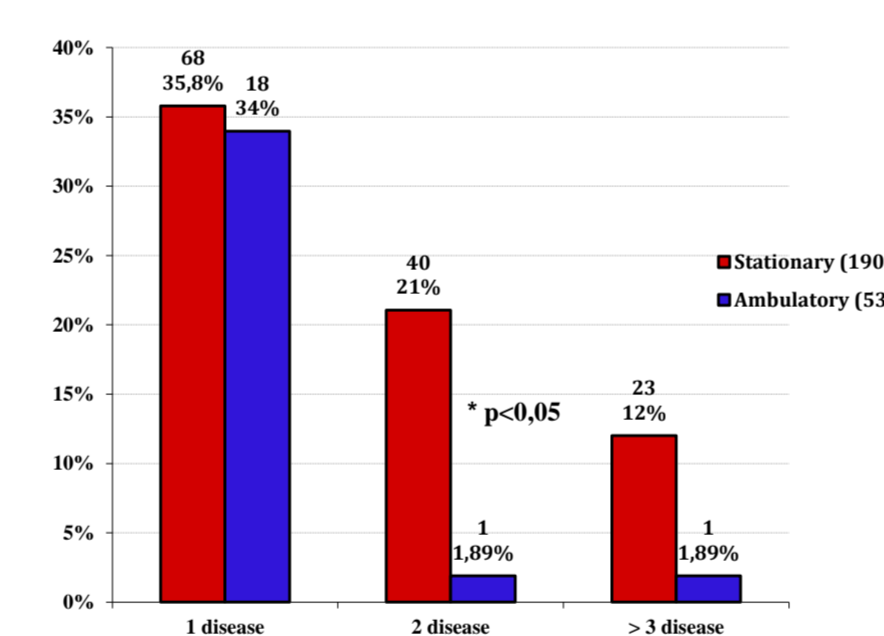
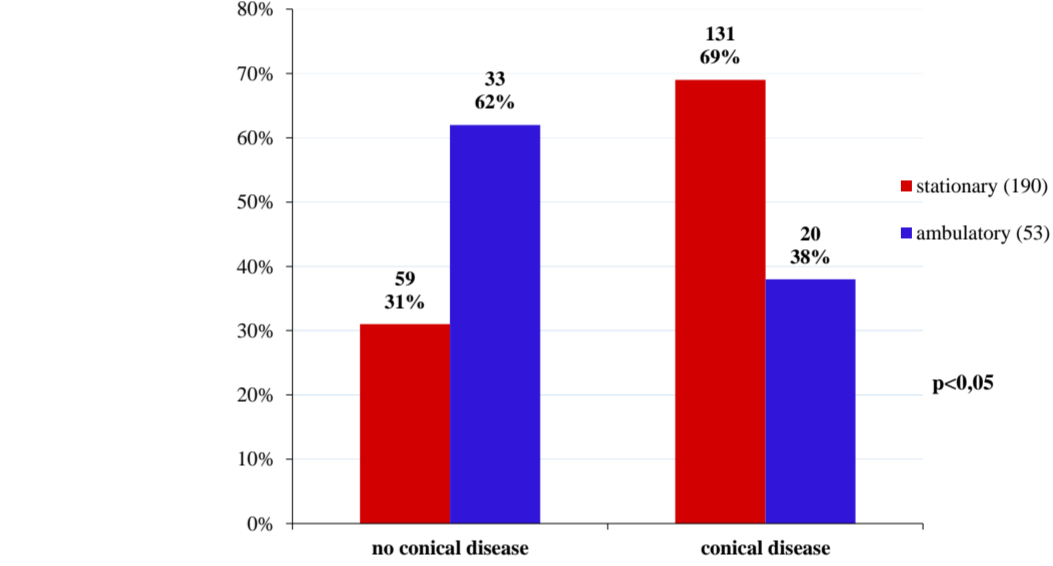
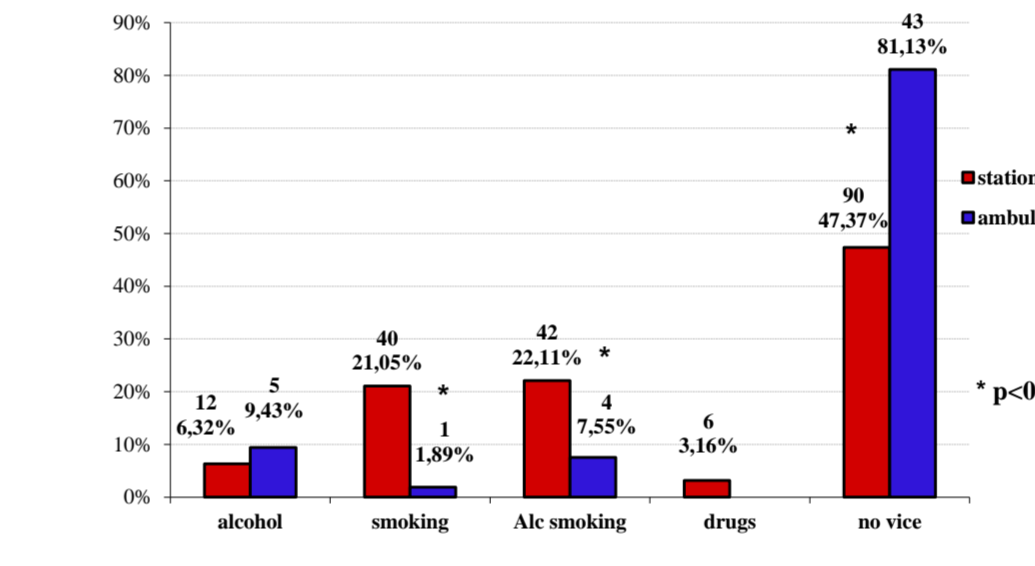
### Results



Epidemiological factors	Inpatients (190)	Outpatients (53)	p
Contact	75 (39.47)	8 (15.09)	<0.05
Migrants	49 (25.79)	7 (13.21)	>0.05
Homeless	19 (10.00)	0 (0)	<0.05
Penitentiary	20 (11)	2 (4)	>0.05
No factor	92 (48.42)	38 (71.70)	<0.05



Occupation/ education	Inpatients (190)	Outpatients (53)	p
Employed	58 (30.53)	34 (64.15)	<0.05
Unemployed	100 (52.63)	10 (18.87)	<0.05
Limited work capacity	9 (4.74)	0	>0.05
Retired	16 (8.42)	6 (11.32)	>0.05
Student	5 (2.63)	2 (3.77)	>0.05
Maternity leave	2 (1.05)	1 (1.89)	>0.05
Primary education	29 (15.26)	2 (3.77)	<0.05
Gymnasium studies	44 (23.16)	3 (5.66)	<0.05
Secondary education	86 (45.26)	33 (62.26)	<0.05
Higher education	21 (11.05)	14 (26.42)	<0.05
Incomplete higher education	10 (5.26)	1 (1.89)	>0.05



Associated chronic pathologies	Inpatients (190)	Outpatients (53)	p
Liver disease	38 (20)	4 (7.55)	<0.05
Lung disease	29 (15.26)	3 (5.66)	>0.05
Cardiovascular diseases	25 (13.16)	2 (3.77)	>0.05
HIV	23 (12.11)	0	<0.05
Diseases of the gastrointestinal tract	20 (10.53)	2 (3.77)	>0.05
Neurological diseases	21 (11.05)	1 (1.89)	>0.05
Diabetes mellitus	15 (7.89)	1 (1.89)	>0.05
Immunosuppressive therapy	9 (4.74)	4 (7.55)	>0.05
Anemia	10 (5.2)	0	>0.05
Lues	7 (3.68)	0	>0.05
Psychiatric diseases	6 (3.16)	0	>0.05
Vascular diseases	3 (1.58)	1 (1.89)	>0.05
Other diseases	31 (16.32)	2 (3.77)	<0.05

Ranking of risk factors	OR, CI95	AR (%)	Ranking
Smoking	13.86 (1.85-103.41)	92.78	I
2 chronic disease	13.86 (1.85-103.41)	92.78	I
Bad living conditions	7.4 (3.63-15.09)	86.50	II
Gymnasium studies	5.02 (1.49-16.89)	80	III
Unemployed	4.77 (2.27-10.06)	79.03	IV
Primary education	4.59 (1.05-19.91)	78.21	V
Contact	3.66 (1.63-8.21)	72.67	VI
Alcohol and smoking	3.47 (1.18-10.18)	71.18	VII
Man	3.29 (1.75-6.17)	69.60	VIII
Passive detection	3.25 (1.72-6.11)	69.23	IX
Liver disease	3.06 (1.04-9.01)	67.3	X

The result of the treatment	Inpatients (190)	Outpatients (53)	p
Successful treatment	157 (82.63)	50 (94.34)	<0.05
Completed	90 (47.37)	12 (22.64)	<0.05
Lost surveillance	67 (35.26)	38 (71.7)	<0.05
Died	14 (7.37)	2 (3.77)	>0.05
Other causes	19 (10)	1 (1.89)	>0.05
TB	11 (5.79)	0	>0.05
Other causes	8 (4.21)	1 (1.89)	>0.05

### Conclusions:

1. Most inpatient cases included men of working age, detected by the passive method, 1/3 of which having a contact with a TB-infected person, 1/4 being migrants, and every tenth was homeless or freed from the jail. The outpatient clinic revealed a predominant number of women and people detected by the active method
2. The social factors were more highlighted in the patients treated in the inpatient departments, such as unfavorable living conditions, lack of employment, low level of education, and vicious skills.
3. Hospitalized patients had 2-3 comorbidities, often in a decompensation stage that required permanent and thorough medical monitoring, whereas most patients in outpatient conditions did not present or had only one associated disease.
4. According to the ranking of risk factors it was established that patients who are exposed to socio-economic factors (smoking, unsatisfactory living conditions, unemployment, low level of education) and medico-biological (association of two chronic pathologies), are more likely to develop tuberculosis that requires hospitalization.
5. A multitude of risk factors present in inpatients, compared to outpatients, lead to the development of TB processes with more serious evolution, and efficient sorting of patients according to hospitalization criteria has contributed to achieving a high success rate of treatment.