Table S1. Processing protocol for automatic tissue processor Leica ASP 200S.

No.	Reagent	Time	Temperature	Pressure/ Vacuum	Time of Draining
1.	water	10 minutes	-	P/V	80 sec.
2.	Ethanol 70°	1½ h	40°C	P/V	80 sec.
3.	Ethanol 80°	1¾ h	40°C	P/V	80 sec.
4.	Ethanol 96°	1¾ h	40°C	P/V	80 sec.
5.	Ethanol 100°	1 h	40°C	P	80 sec.
6.	Ethanol 100°	1½ h	40°C	P/V	80 sec.
7.	Ethanol 100°	1½ h	40°C	P/V	80 sec.
8.	Xylene	2 h	52°C	P	80 sec.
9.	Xylene	2 h	52°C	P	80 sec.
10.	Xylene	2 h	55°C	P/V	80 sec.
11.	Paraffin	1 h	58°C	P	80 sec.
12.	Paraffin	2 h	58°C	P	80 sec.
13.	Paraffin	3 h	58°C	P	80 sec.

Table S2. Processing protocol for automatic tissue processor Leica Peloris 2.

No.	Reagent	Time	Temperature	Pressure/ Vacuum	Time of Draining
1.	Formalin 10%	44 min	45°C	P	10 sec
2.	Ethanol100°	30 min	45°C	P	10 sec
3.	Ethanol 100°	60 min	45°C	P	10 sec
4.	Ethanol 100°	60 min	45°C	P	10 sec
5.	Ethanol 100°	60 min	45°C	P	10 sec
6.	Ethanol 100°	90 min	45°C	P	10 sec
7.	Ethanol 100°	90 min	45°C	P	10 sec
8.	Xylene	75 min	45°C	P	10 sec
9.	Xylene	75 min	45°C	P	10 sec
10.	Xylene	210 min	45°C	P	10 sec
11.	Paraffin	120 min	60°C	V	10 sec
12.	Paraffin	180 min	60°C	V	10 sec
13.	Paraffin	180 min	60°C	V	10 sec

Table S3. Protocol for Ziehl Nielsen stain.

1. Bring section to distilled water.
2. Carbolfuchsin solution - 10 minute; heat with open flame beneath the slide until vapor emission
3. Wash in tap water.
4. Decolorizing solution (Acid differentiation buffer) – 1-2 seconds
5. Wash in tap water.
6. Methylene blue solution 1% – 30 seconds
7. Wash in tap water.
8. Dehydrate through alcohol, xylene and mount

Table S4. Experience of pathologists performing annotations.

Pathologist	Grade	Years of Expertise as Certified Pathologist
SZ	Senior pathologist, PhD, professor of pathology	23
CP	Senior pathologist, PhD	12
LN	Senior pathologist, PhD, lecturer	14
MiC	Senior pathologist, PhD student	7
LS	Senior pathologist, PhD student	9

AC	Pathologist, PhD student	4
MB	Pathologist	4

Table S5. Componence of teams of pathologists involved in testing process.

Team of Pathologists	Years of Experience
LN, CP	11-15
LS, MC	6-10
AC, MB	1-5
OS, IT	residents

Table S6. Performance metrics used to evaluate our proposed method.

Performance Metrics	Formula	Equivalent
Sensitivity	TP / (FN + TP)	
Specificity	TN / (FP + TN)	
Precision	TP / TP + FP)	
Negative predictive value	TN / (FN + TN)	
False negative rate	FN / (TP + FN)	1 − sensitivity
False positive rate	FP / (FP + TN)	1 − specificity
Accuracy	(TP + TN) / (TP + TN + FP + FN)	
F1	2 TP/(2 TP + FP + FN)	

TP – true positive, TN – true negative, FP – false positive, FN – false negative.

Table S7. Errors in WSIs evaluation for qualified pathologists.

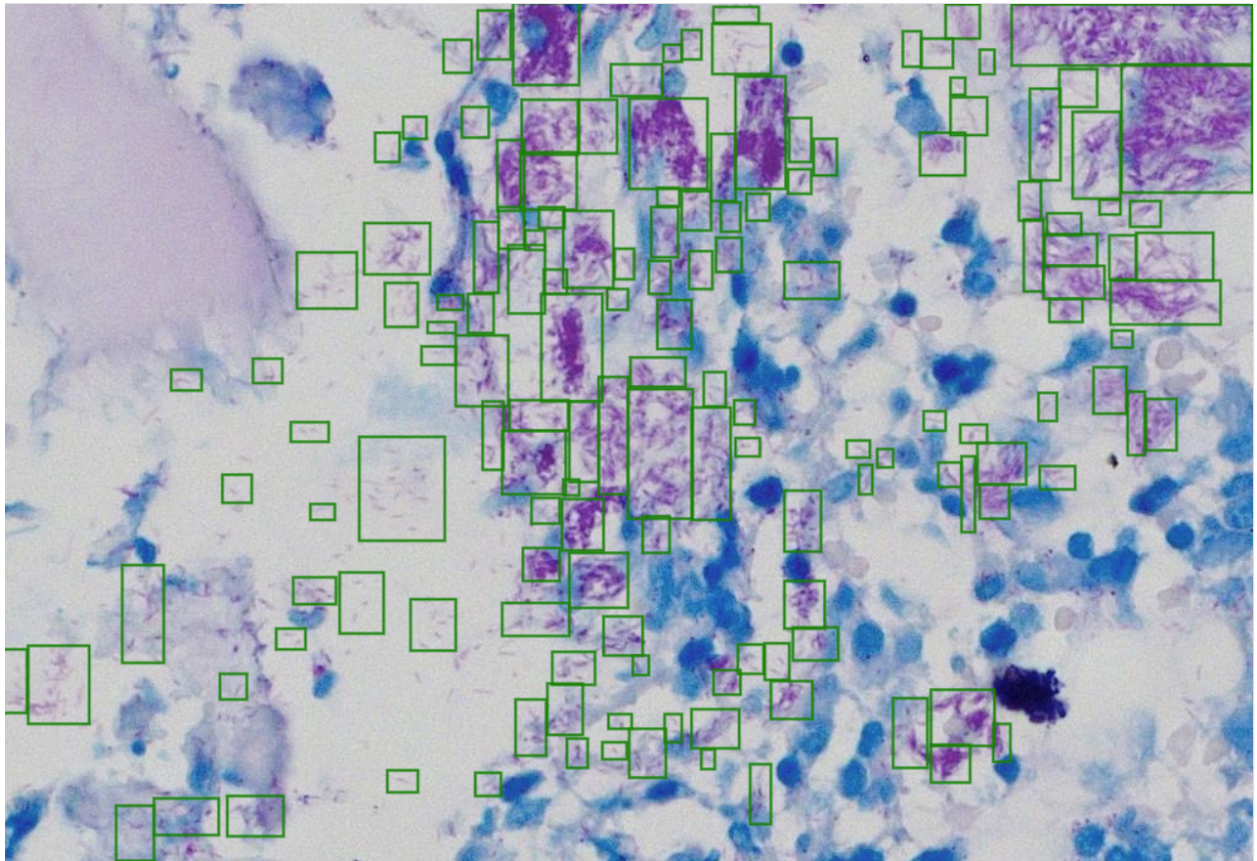| Qualified Pathologists (6 Persons x 60 WSI)			Negative cases	Positive cases	total
		0	29	10	39
		1	4	6	10
No of errors per WSI		2	1	6	7
		3	2	0	2
		4	1	1	2
		5	0	0	0
		6	0	0	0
cases with errors (of 60 WSIs)			8	13	21
%			21.62%	56.52%	35.00%
No of errors (of 360 examinations)			16	22	38
%			7.21%	15.94%	10.56%

Figure S1. Annotation of AFB in in-house platform with green boxes encircling small groups of bacilli. ZN x 400.
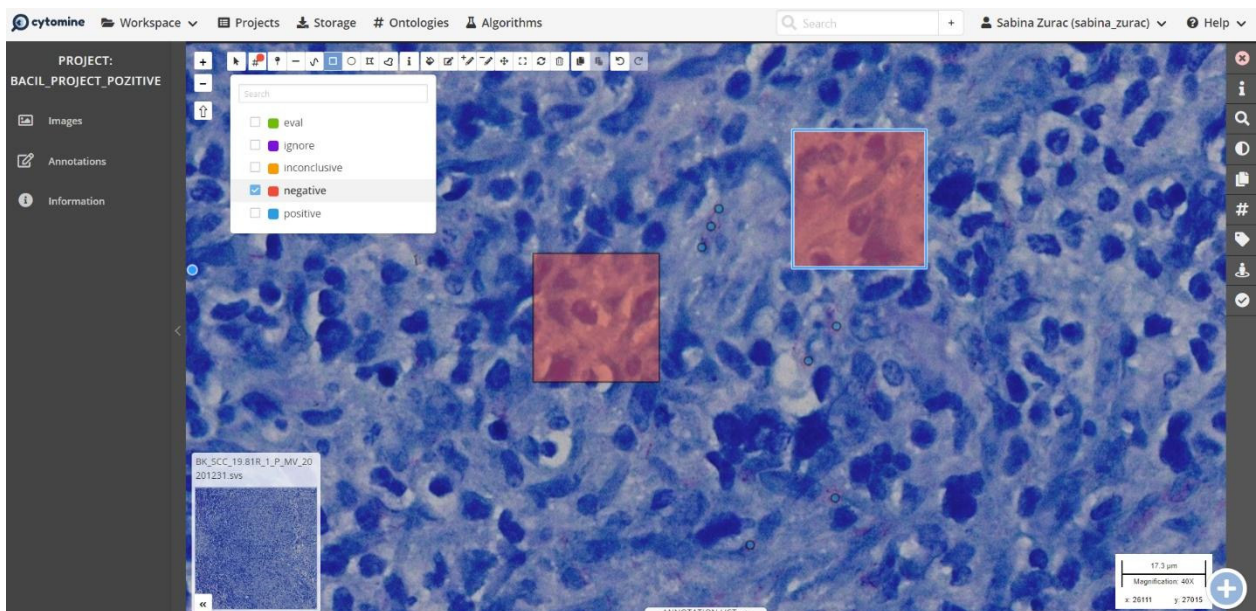

Figure S2. Annotation of AFB in Cytomine platform with blue dots on top of the bacilli and negative red square areas. Tuberculous lymphadenitis with very few bacilli. ZN x 400.
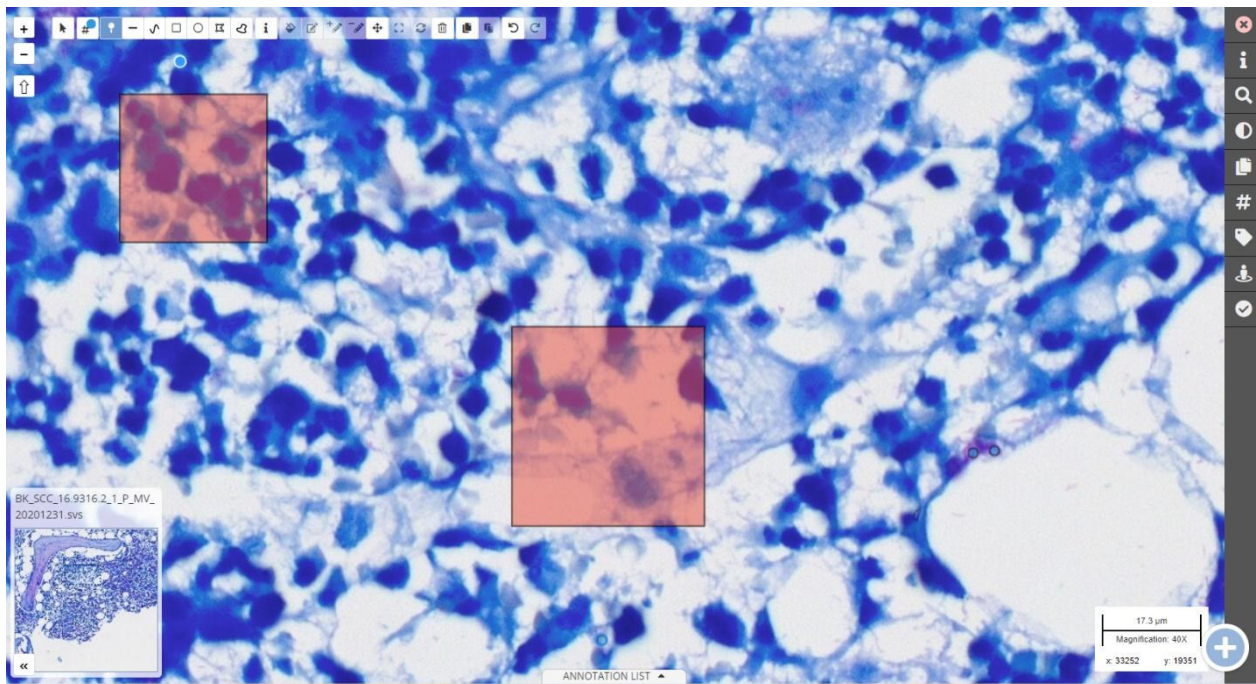
Figure S3. Annotation of AFB in Cytomine platform with blue dots on top of the bacilli and negative red square areas. Bone marrow with variable distribution of AFB. ZN x 400.
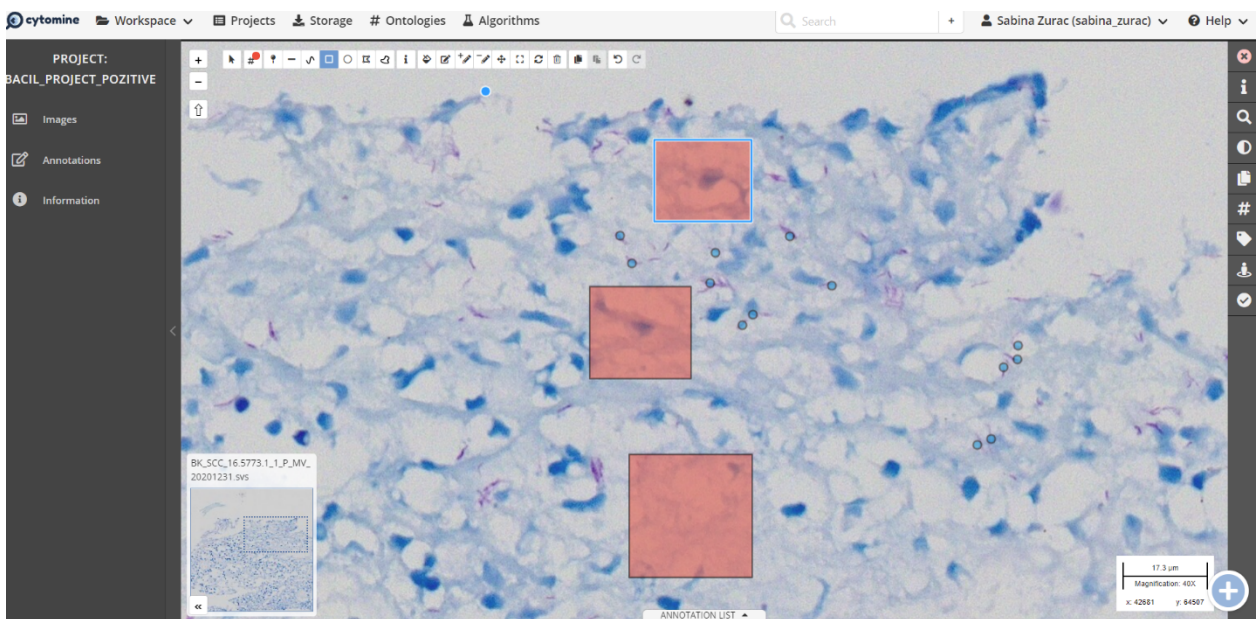

Figure S4. Annotation of AFB in Cytomine platform with blue dots on top of the bacilli and negative red square areas. Case with numerous AFB. ZN x 400.
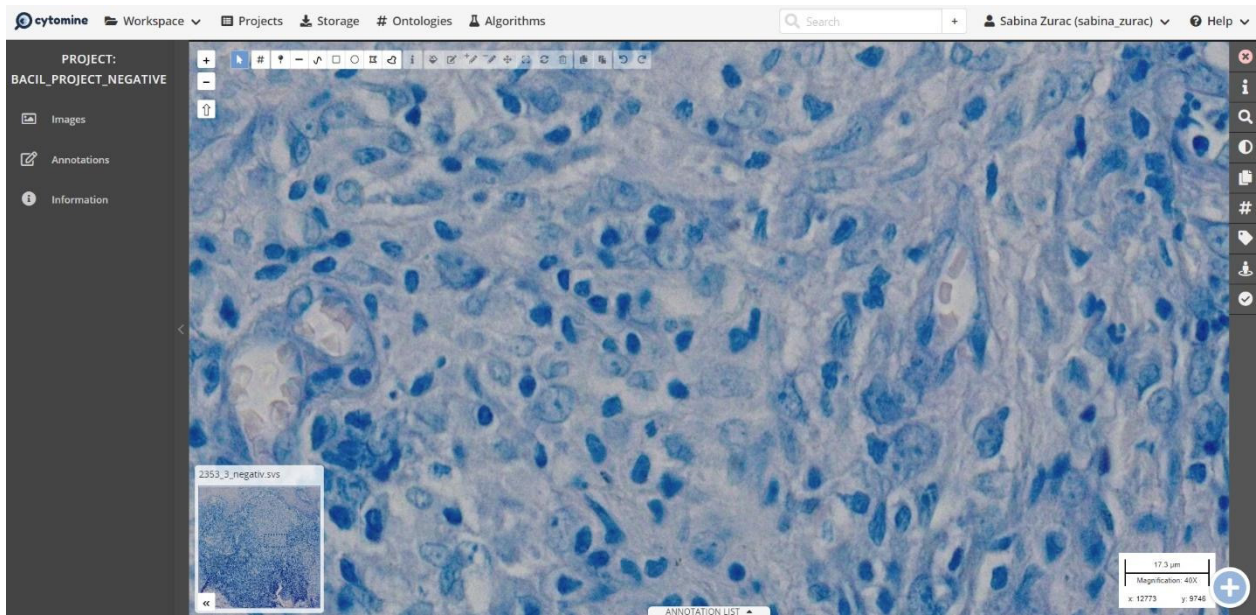
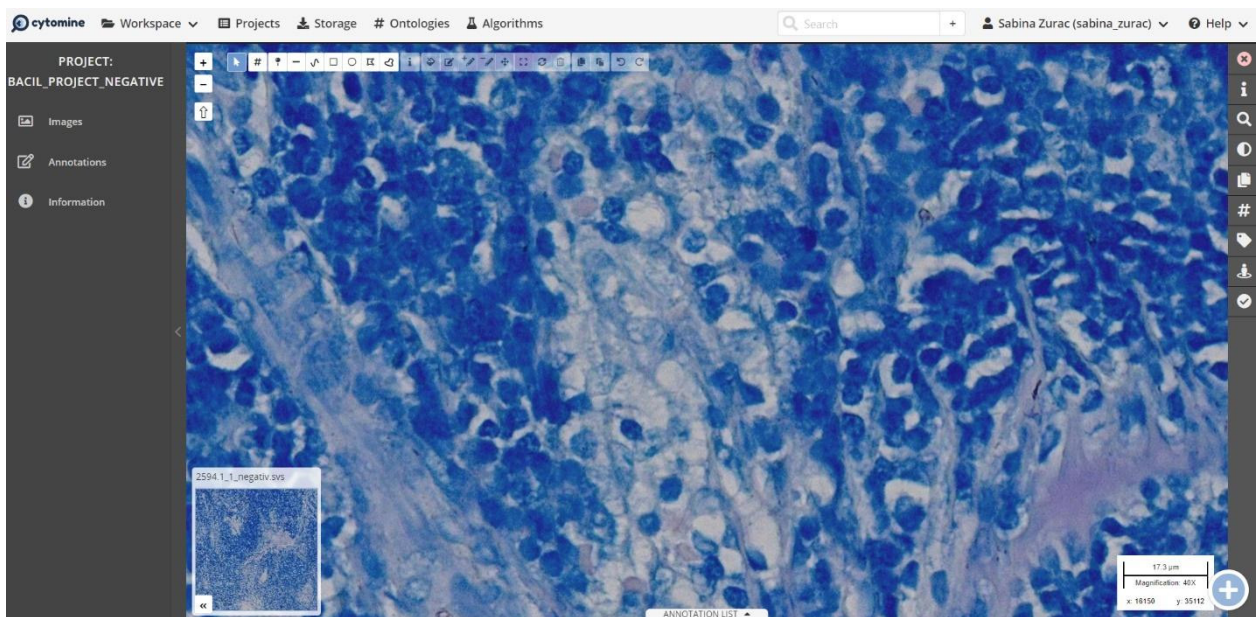**Figure S5.** Negative case – granulation tissue. ZN x 400.

Figure S6. Negative case – reactive lymphadenitis with sinusal histiocytosis. ZN x 400.