

# TELECYTOLOGY FOR RAPID ASSESSMENT OF CYTOLOGICAL SPECIMENS

Izidor Kern, Simona Gabrič, Nadja Triller, Igor Požek

University Clinic of Respiratory and Allergic Diseases  
Golnik, Slovenia

# Background

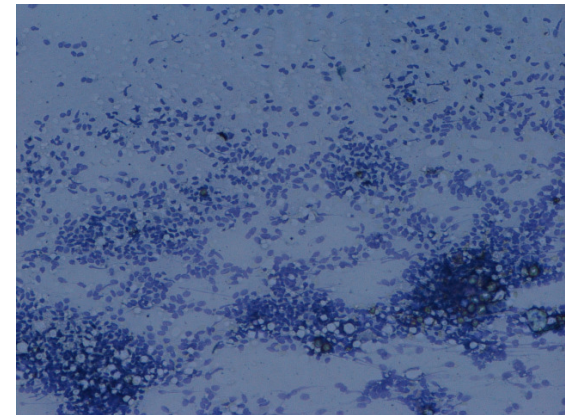
- immediate assessment of FNAB improves diagnostic yield, decreases the need for repetition, shortens the diagnostic work-up
- ROSE is time consuming
- telecytology eliminates travelling time

## Aim

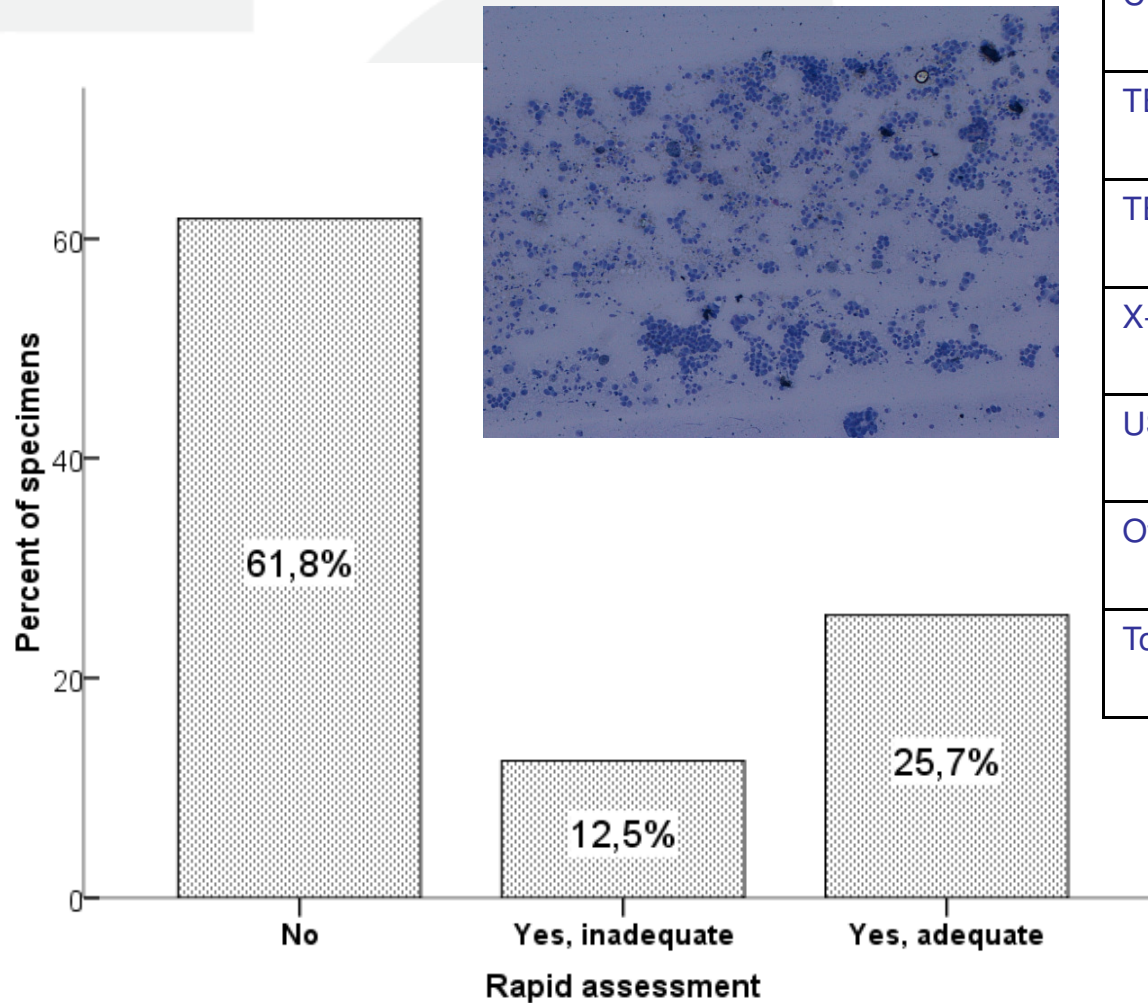
to assess the value of immediate evaluation of various respiratory specimens with the use of telecytology system

# M & M

- 6 months period
- all consecutive guided FNAB & TBNA
- respiratory specimens
- direct smear of aspirated material → quick wet fixation in Delaunay → staining by one drop of toluidine blue → coverslipping
- Coolscop II, phone connection:
  1. specimen adequacy
  2. preliminary dg
  3. additional tests
- routine lab processing, comparisson with final dg



# 385 specimens

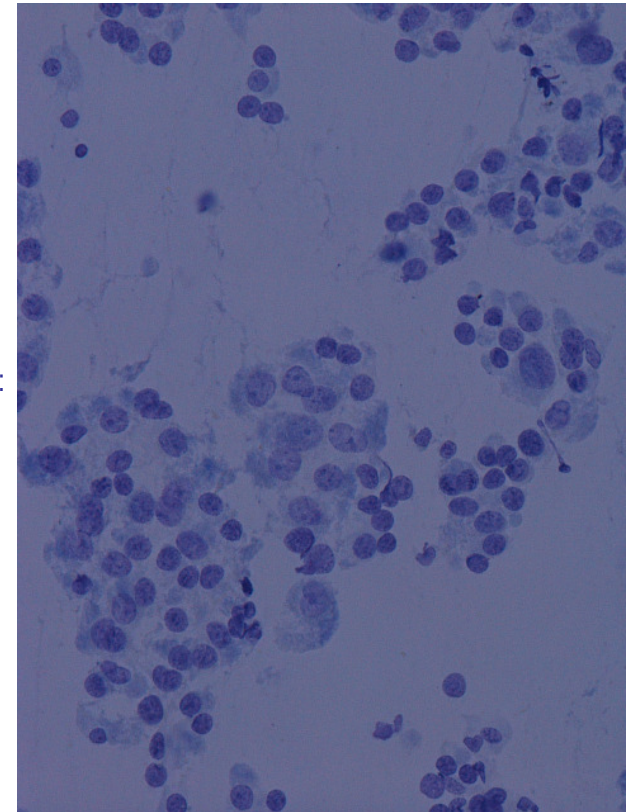
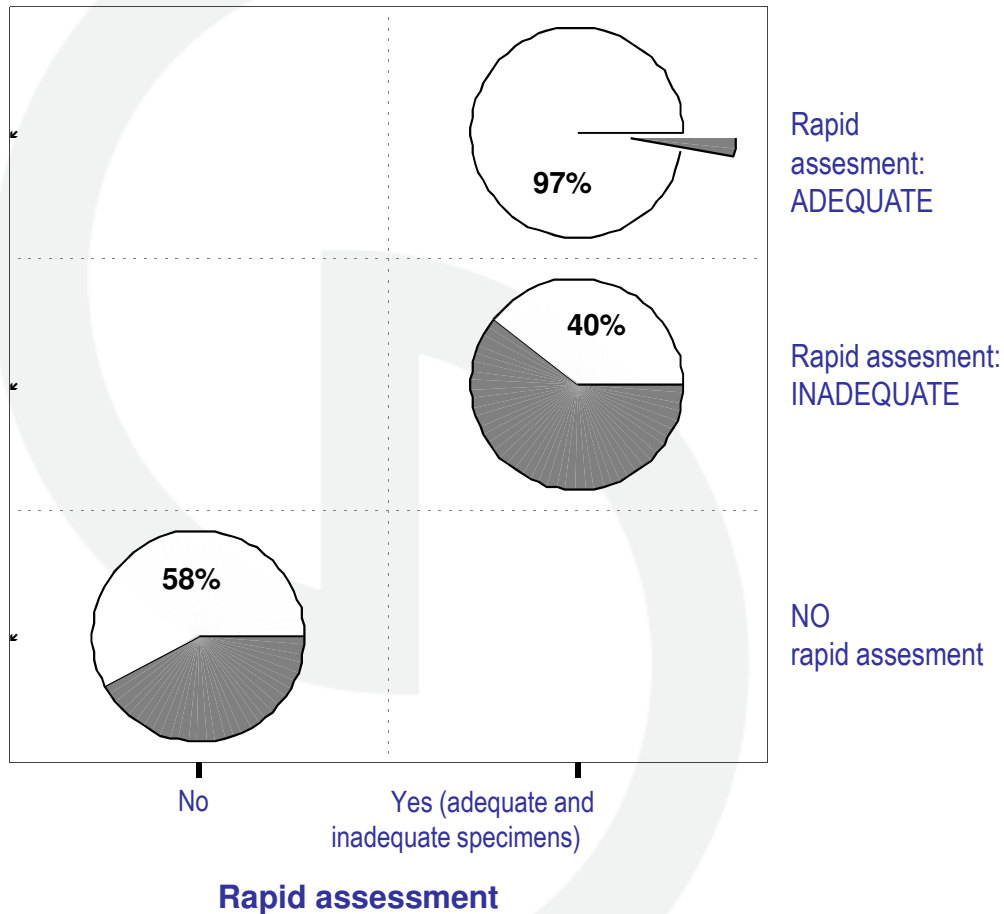


Type of specimen	Number	%
Imprints of biopsy	8	2
CT FNAB lung	51	13
TBNA lung	72	19
TBNA lymph nodes	224	58
X-rays FNAB lung	15	4
US FNAB lung	14	4
Others	1	0
Total	385	100

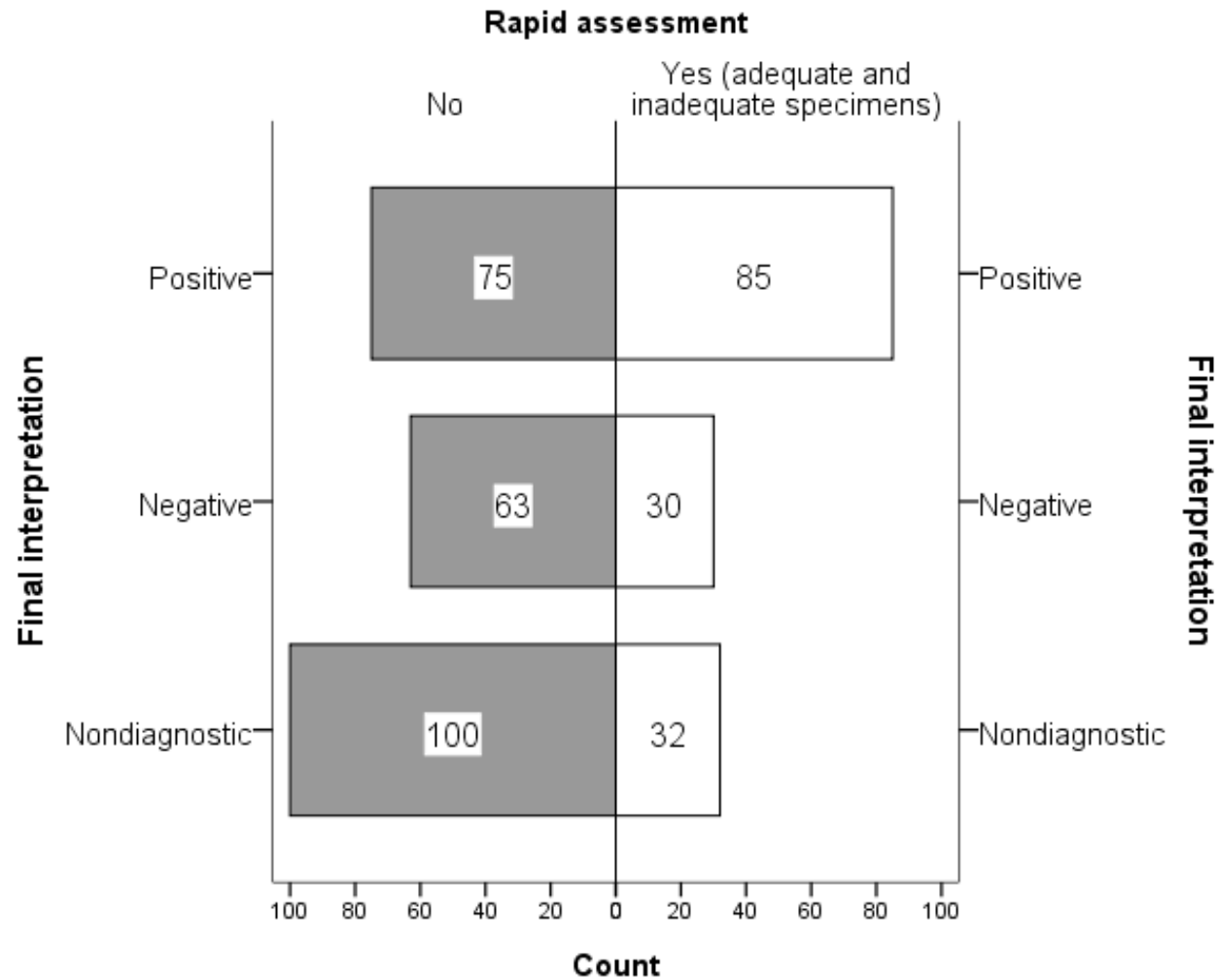
# non-representative versus representative specimens

## Final interpretation

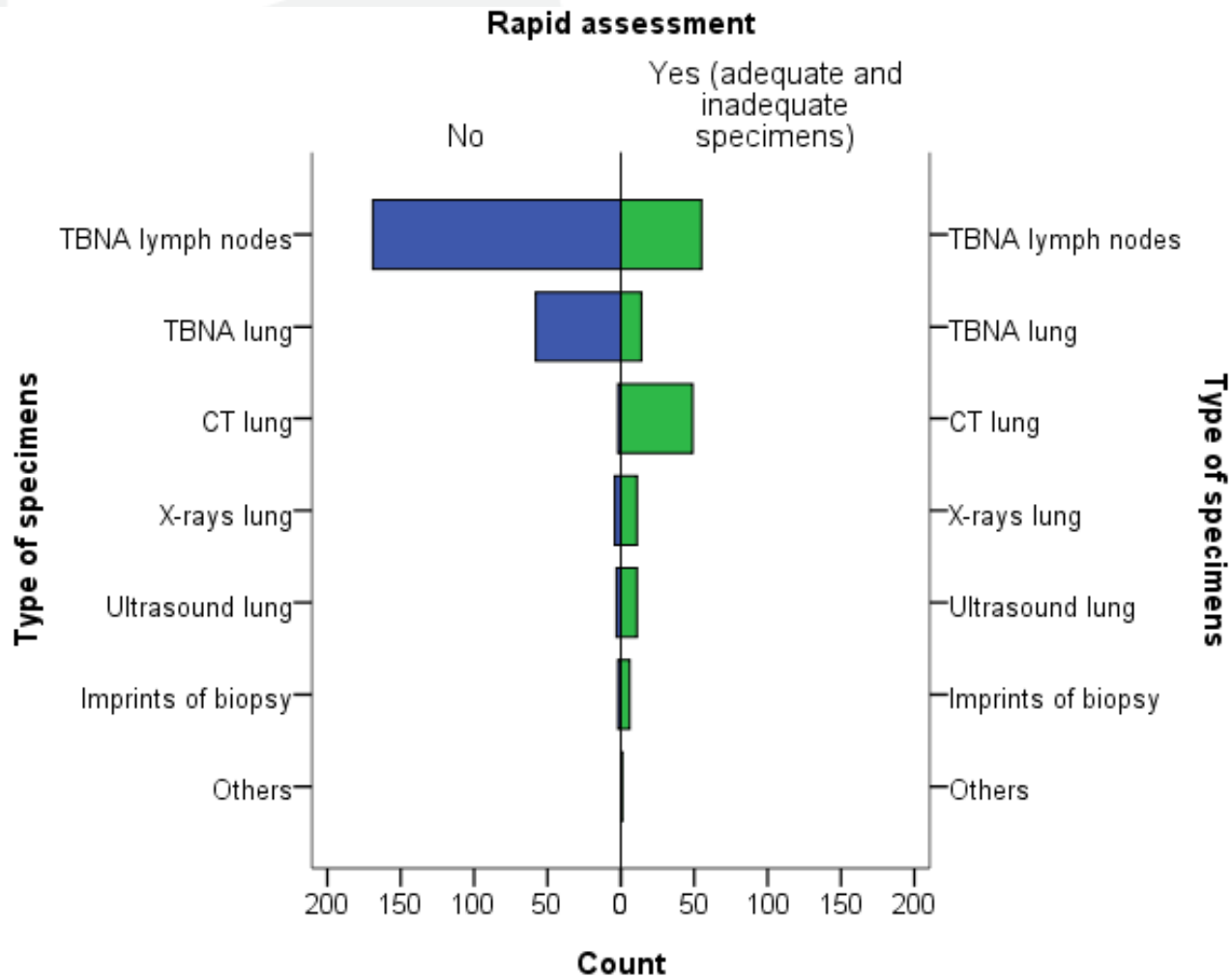
- Nondiagnostic
- Diagnostic (negative and positive specimens)



# final interpretation comparing the use of rapid assessment



# Distribution of rapid assessment according to the type of specimen



# Percentage of non-diagnostic specimens at final interpretation according to the type of specimen

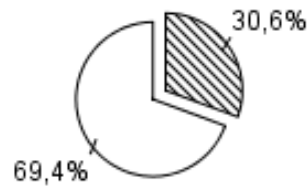
Imprints of biopsy



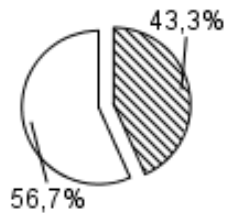
CT lung



TBNA lung



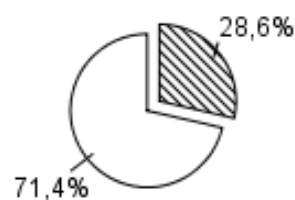
TBNA lymph nodes



X-rays lung





Ultrasound lung

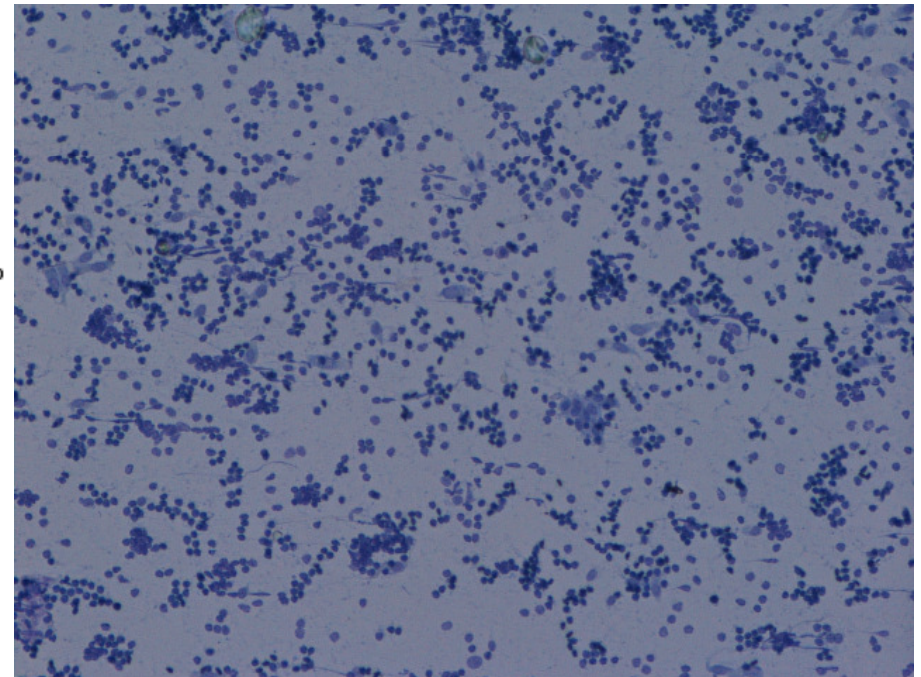


Others

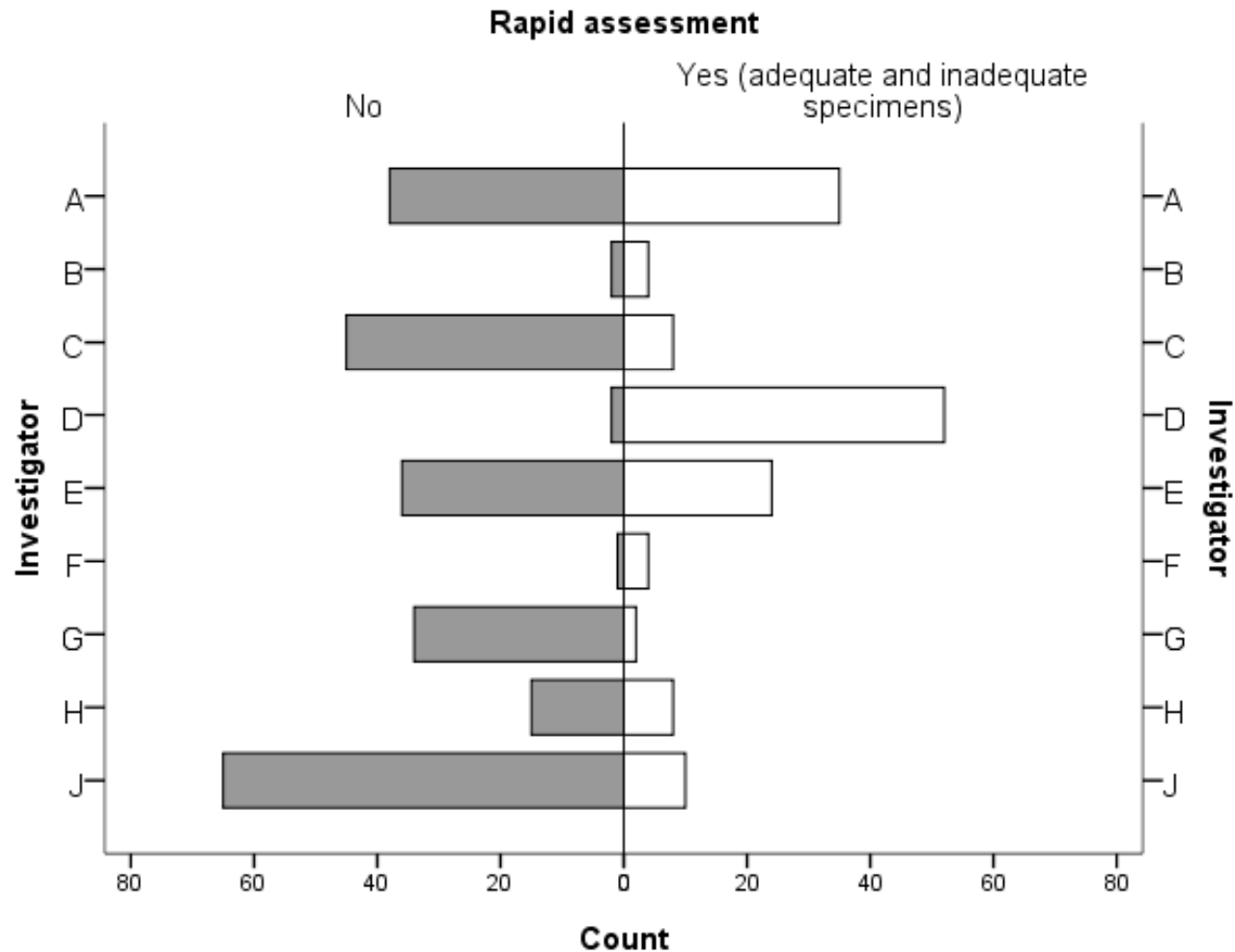


Final interpretation

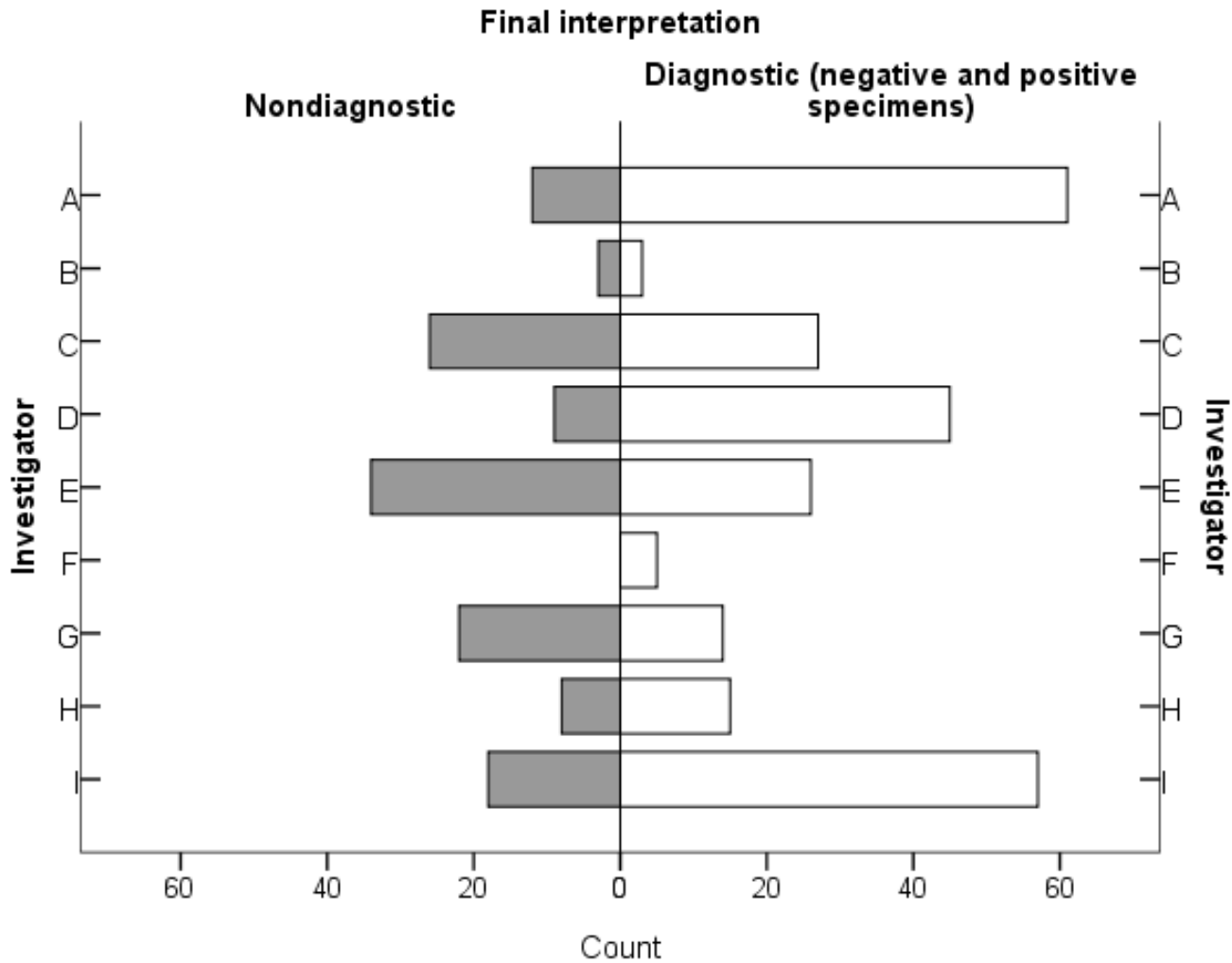
-  Nondiagnostic
-  Diagnostic (negative and positive specimens)



# use of rapid assessment among investigators

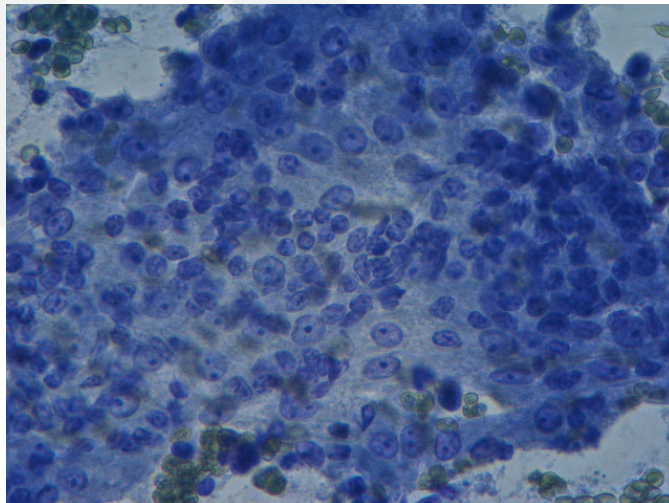


# investigators' success



# Conclusion

Rapid evaluation with the use of telecytology system improves the diagnostic yield of guided fine needle aspiration biopsies by decreasing the percentage of nonrepresentative specimens.



# Further experiences

- rapid assessment is in daily routine practice (similar to frozen sections)
- learning process for investigator
- increase of use ( $> 75\%$  of TBNA)
- additional decrease of nonrepresentative specimens ( $< 10\%$ )
- cytotechnologist can be trained for this task