



MICROPHOTOGRAPHY BY MOBILE SIMPLIFIED

- DR. SANJEEV Y. PATWARDHAN
M D Pathology

MICROPHOTOGRAPHY BY MOBILE

Most of us have tried taking microphotographs by mobile camera....

- We need to hold mobile with steady hands; little away from eyepiece align and focus optics and click...
- Quite tricky and skilled to start with.
- Requires practice, patience and time



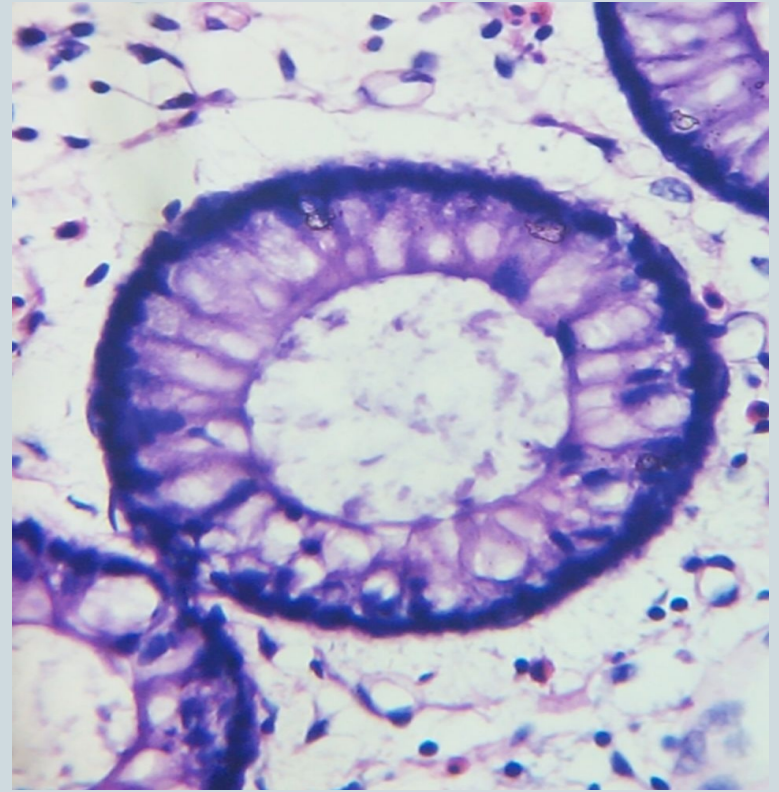
SIMPLE AND EASY SOLUTION

- **ADAPTOR....**
- Just cut and cut top and bottom of suitable pet or plastic bottle which fits eyepiece ...
- Trim edges for finer focussing
- Touch mobile camera to edge of adaptor and click.



MICROPHOTOGRAPHY BY MOBILE

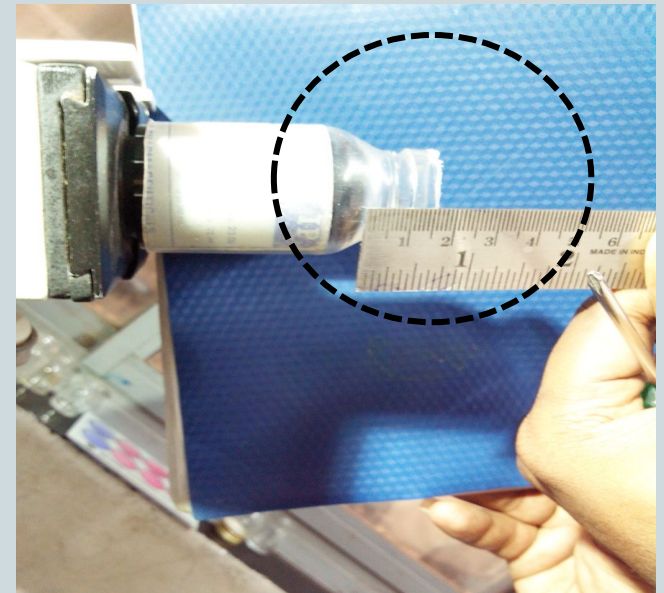
- With little practice you can capture microscopic images and share those using suitable app.



MICROPHOTOGRAPHY BY MOBILE

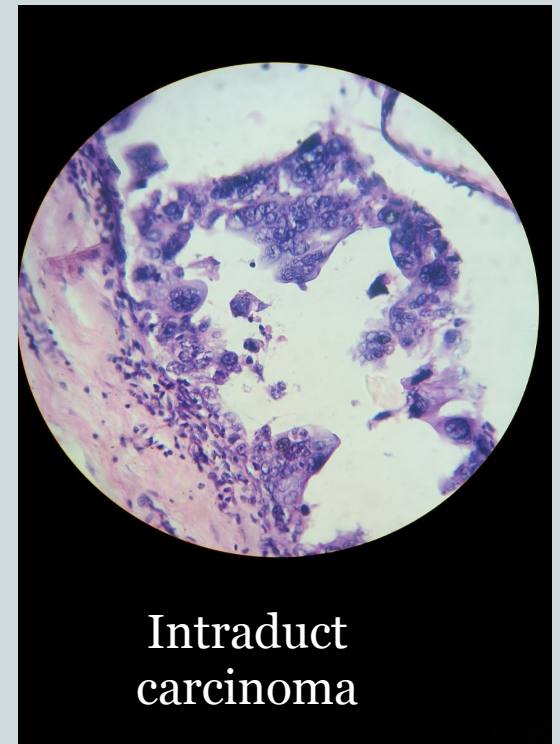
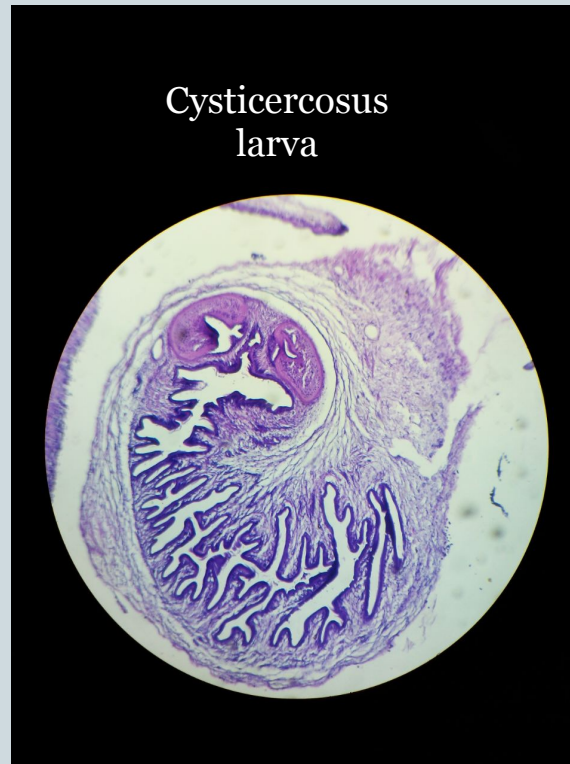
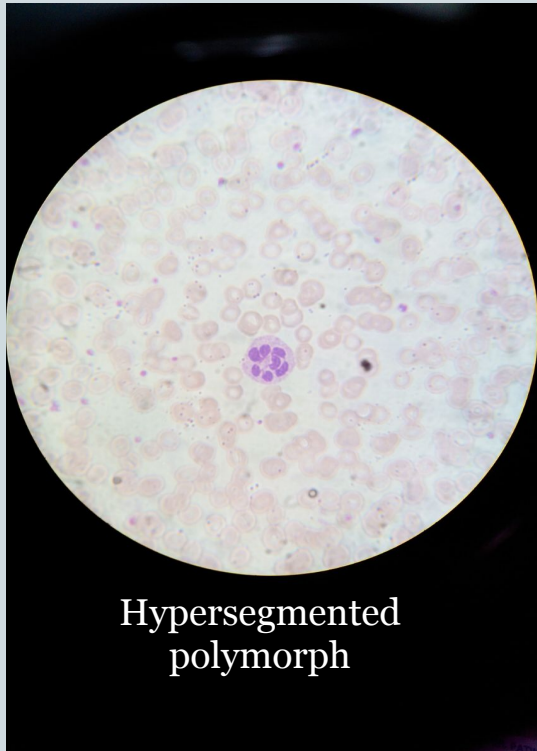
Tips

- Judge distance between mobile cam and eyepiece lense required for your system, and then cut top of bottle.
- Distance should be around 15 mm
- 30-40 ml medicine pet bottle are likely to fit our requirement.
- Mobiles with top centre cam are easier to work with.



FEW IMAGES CAPTURED

- With Labomed vision 2000 microscope and micromax canvas 2 mobile....



HANDS FREE DISPLAY SYSTEM

Still you need to hold mobile against adaptor, focus and click....

- But with further innovation
- We can make hands free display system easily.
- Just find your mobile box, glue and thermocole pieces.



HANDS FREE DISPLAY SYSTEM

Making display box....

- Holding bottle in hand...
mark bottom of mobile box
to align camera hole of mobile tray
- Cut the hole in bottom
- Put the bottle in hole as shown .
- Fix with thermocole piece and glue



HANDS FREE DISPLAY SYSTEM

Display system looks like this

- Now put that box around eyepiece....
- Place mobile to align camera hole in tray
- Adjust packing to get perfect display.
- Fix with glue.
- And you are

“READY FOR THE SHOW”



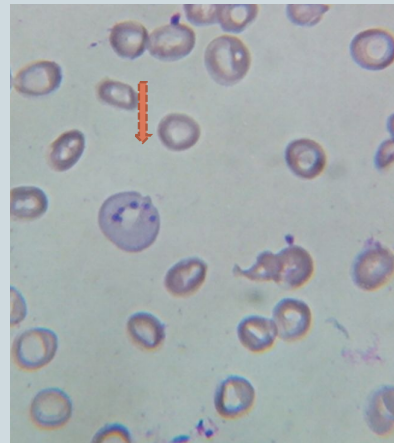
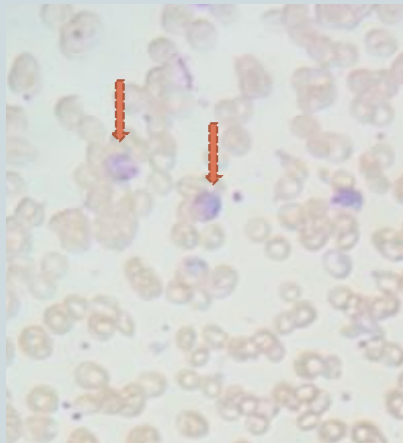
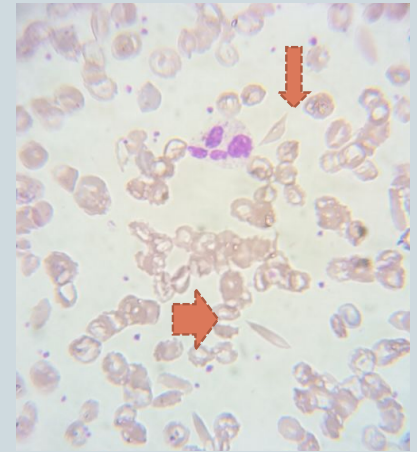
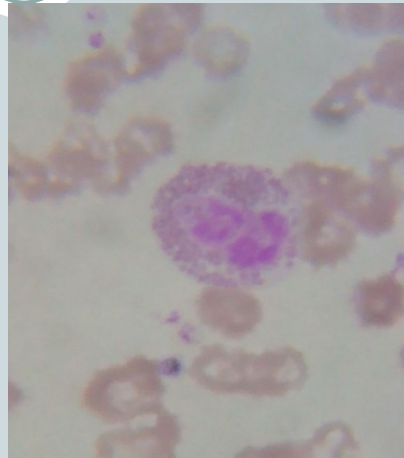
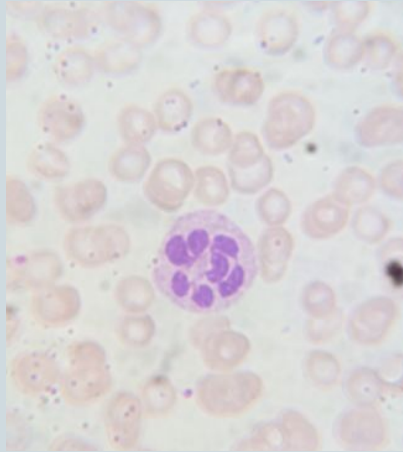
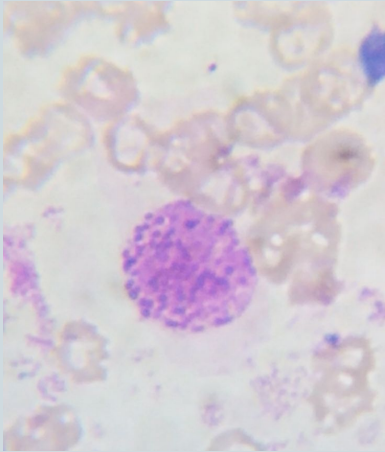
HANDS FREE DISPLAY SYSTEM

Display system

- Cost free - don't spend single paisa.
- Fine quality of images
- Excellent system for teaching
- Capture and share images
- Get opinion from colleagues.
- Store images for documentation.
- Print with reports
- View on larger screens.
- Innovate as per your requirements



Hematology

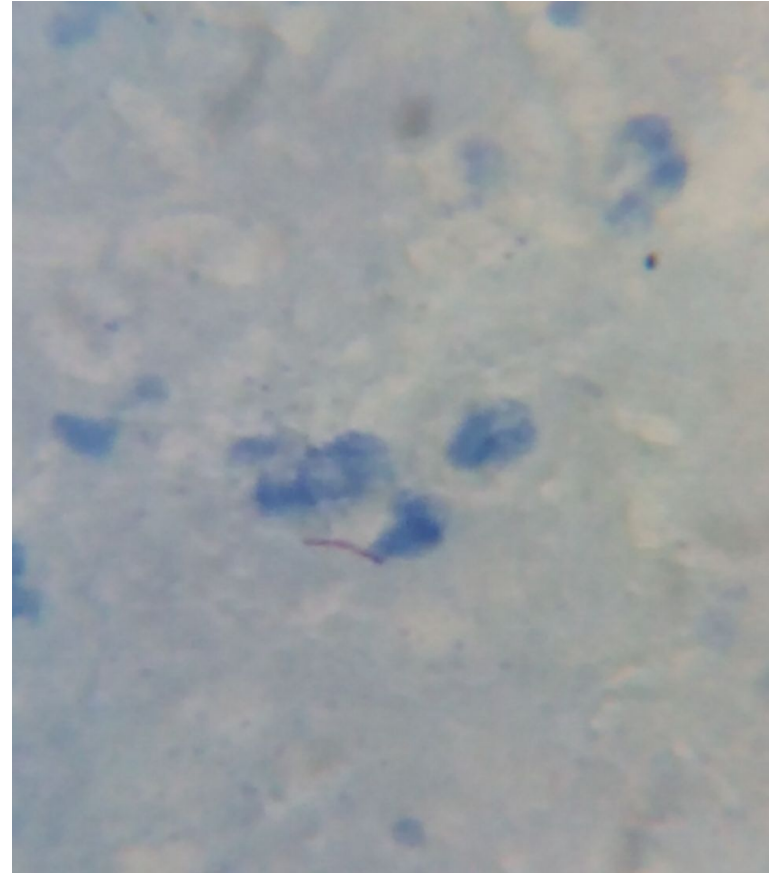


HANDS FREE DISPLAY SYSTEM

Clinical pathology
Hookworm egg

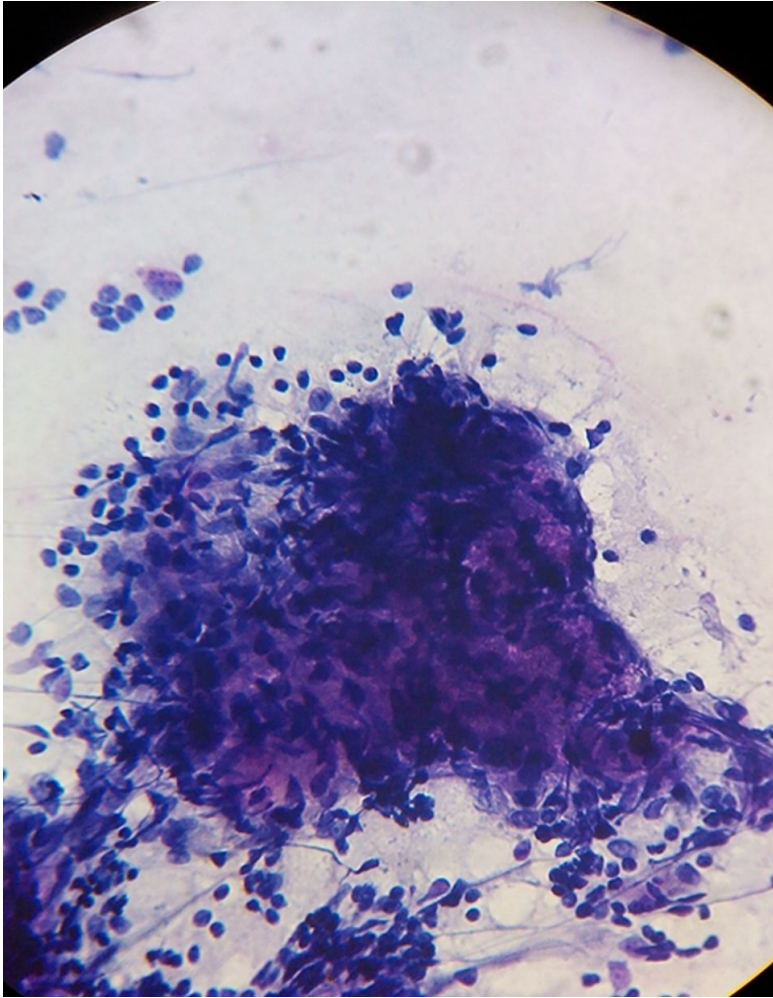


Microbiology AFB:

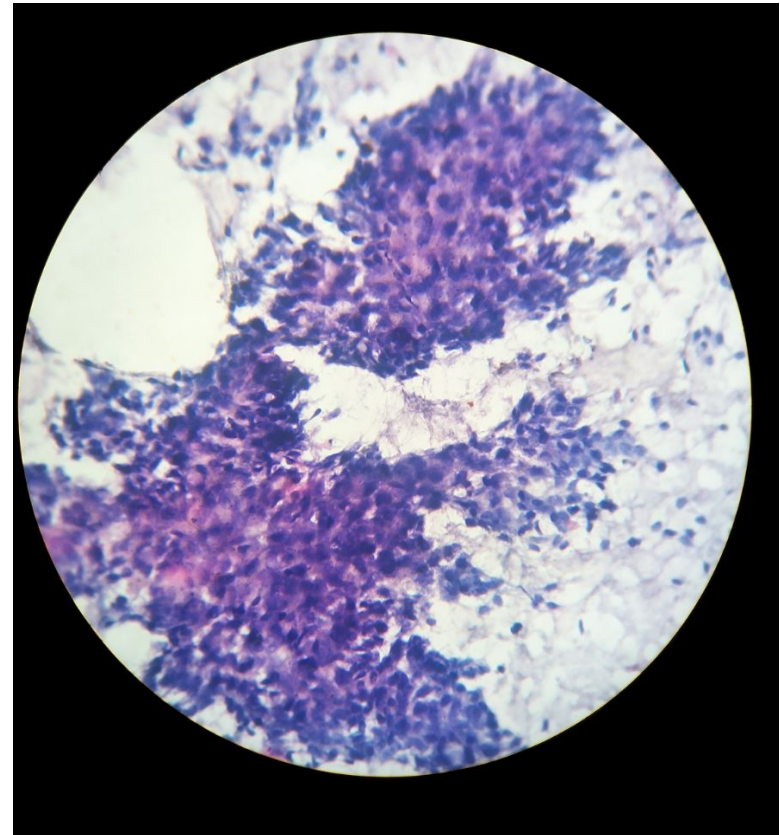


HANDS FREE DISPLAY SYSTEM

Cytology : Epitheloid granuloma

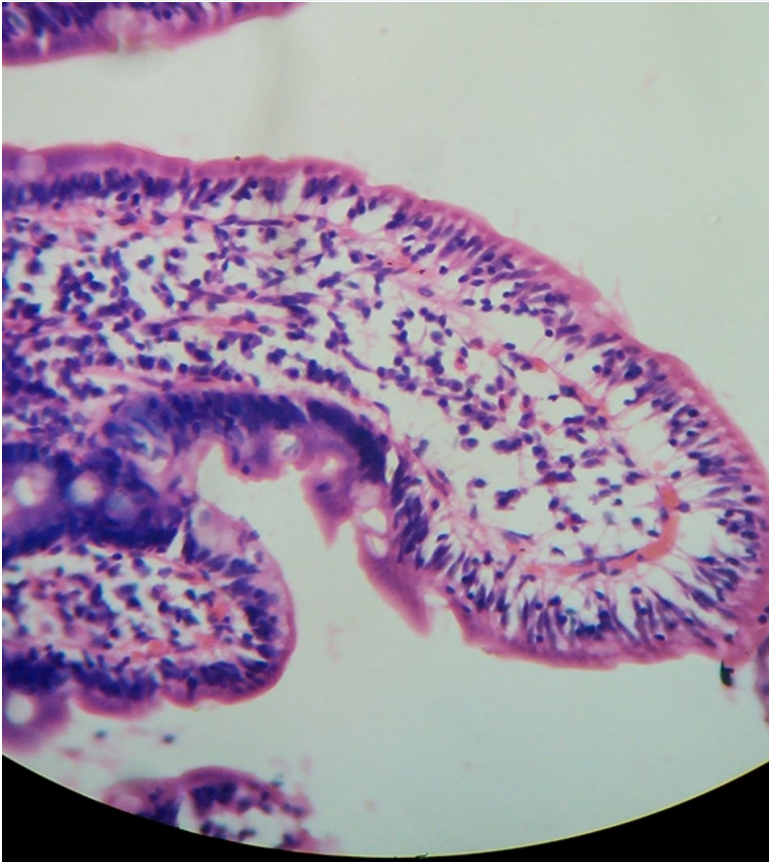


Cytology : Suspected synovial sarcoma.

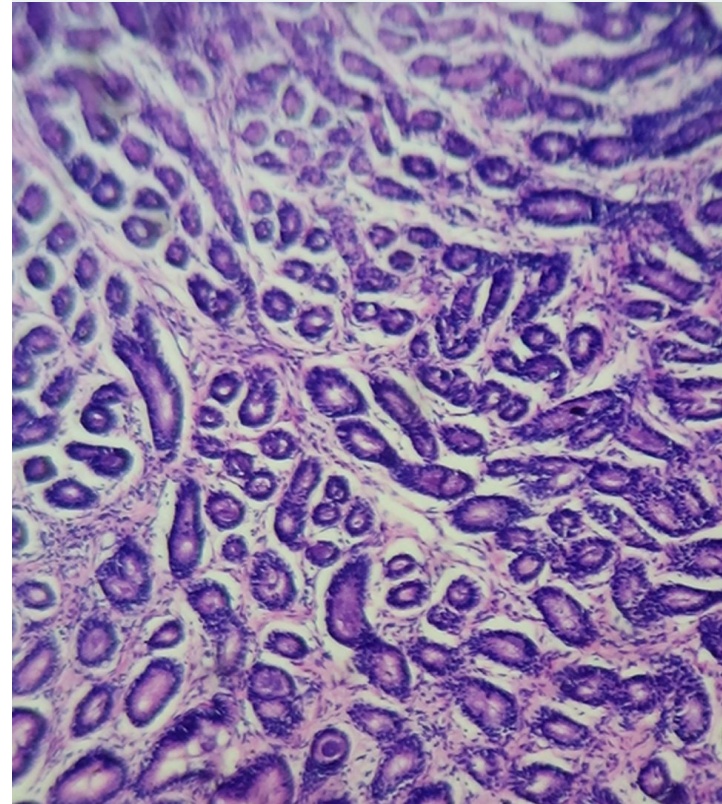


HANDS FREE DISPLAY SYSTEM

Duodenal biopsy:
Can easily count number of
lymphocytes / 100 enterocytes

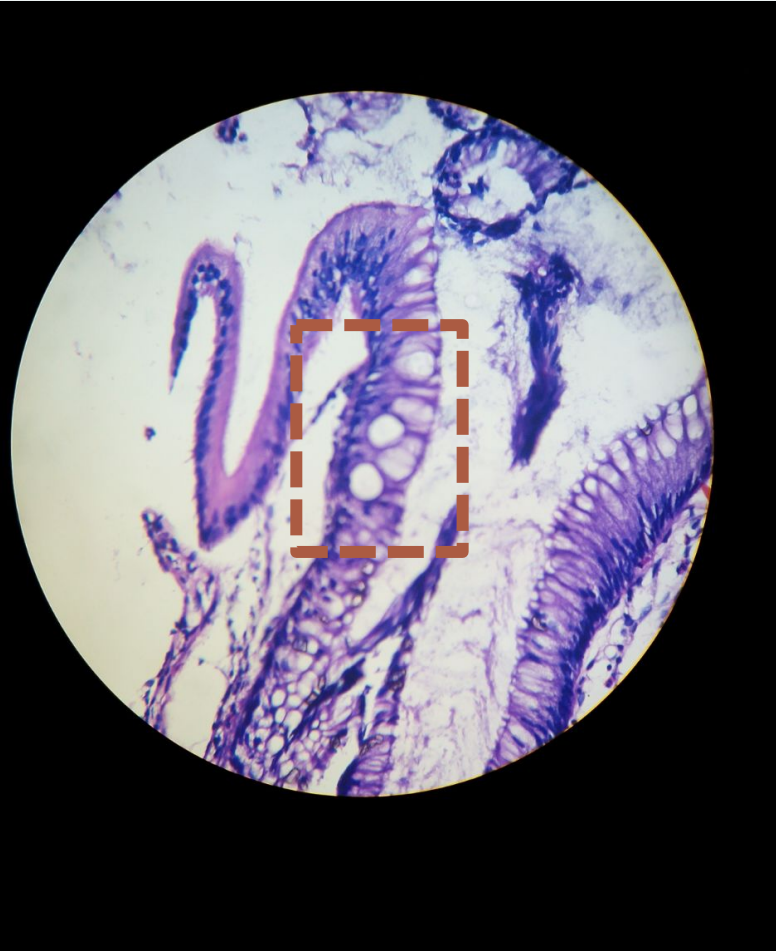


Breast lump:
Tubular adenoma showing
compactly arranged glands.

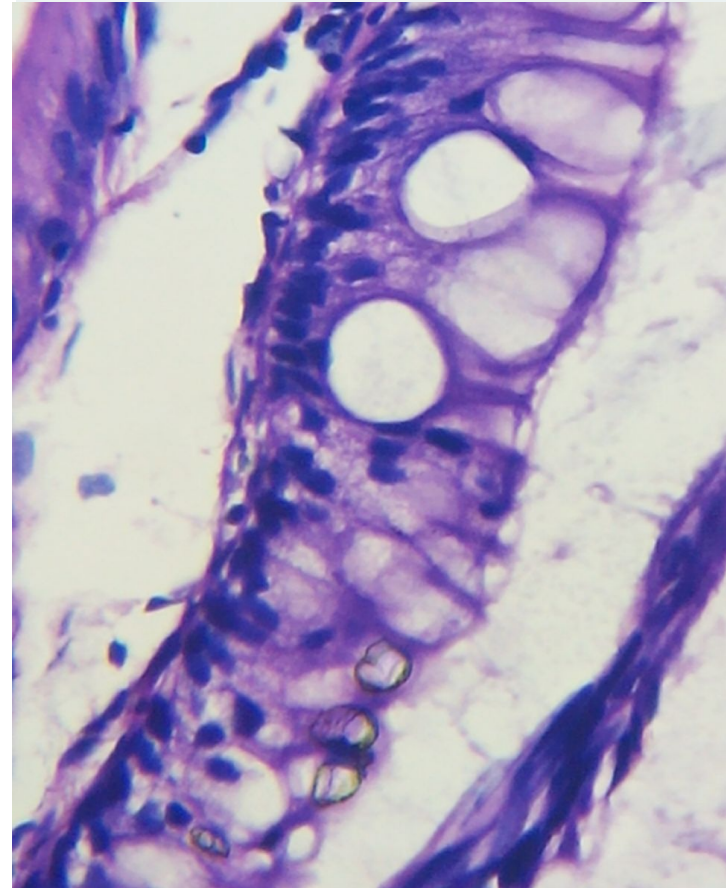


HANDS FREE DISPLAY SYSTEM

Intestinal biopsy:
Villi showing goblet cells



Intestinal biopsy:
**Zooming: extra
enlargement with mobile**





Thank you