

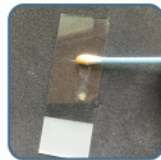
Ear Cytology Method & Results

Method

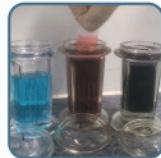
1. With a cotton bud, gently remove some of the material from just inside the ear canal. Repeat with a separate cotton bud with the opposite ear.



2. To preserve the cells, roll the cotton bud onto a microscope slide (do not smear/rub). Be sure to label each slide correctly for the left and right ear. Then allow to air dry for 5-10 minutes (a hair dryer can be used to gently heat fix the slide).



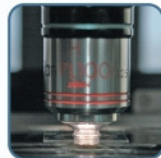
3. Stain the sample using Romanowski Stain (Diff Quick™, Rapi Diff II™) then allow to air dry for 5-10 minutes.



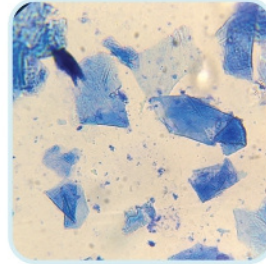
4. Place under microscope and starting with a low magnification, find a densely purple area as this is where inflammatory cells are more likely to be.



5. Then work your way up to a high magnification, remembering to use oil immersion for the x100 lens, which is necessary to view bacteria and yeast.

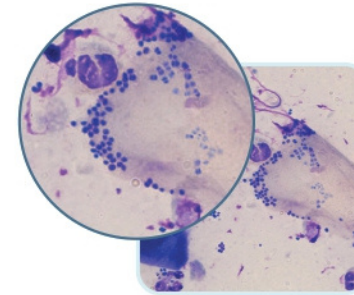


Results

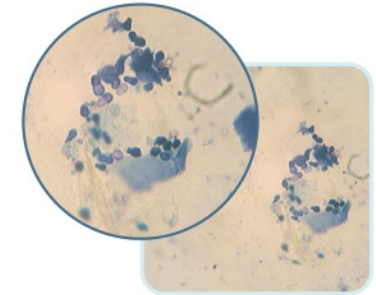


Normal ear
Epithelial cells and debris. Small numbers of yeast and bacteria is normal.

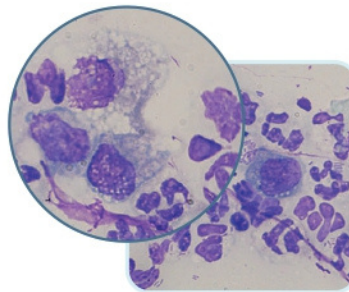
Large numbers of epithelial cells and few microorganisms mean non-infectious causes of otitis should be considered (Seborrheic diseases / hypothyroidism etc.)



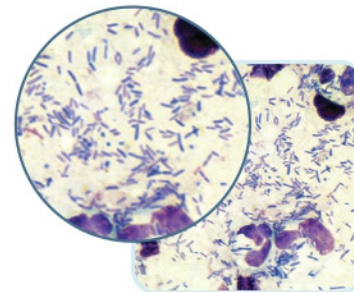
Infected ear showing Cocci Round bacterium.



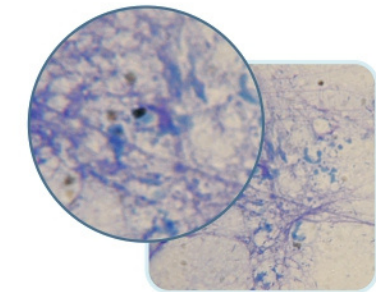
Infected ear showing malassezia. Peanut shaped yeast - discharge is typically brown with a distinctive yeast smell.



Neutrophils / Macrophages
Abnormal inflammatory cells.



Infected ear showing pseudomonas
Rod shaped bacterium.
Mucousy green discharge common. Follow with culture and sensitivity.



Bacterial Biofilm
Bacterial clusters encased in a slimy protective matrix which increases the likelihood of bacterial resistance.