Training Instruction for Reading
KOH Wet Preps
for MTN studies
Reading KOH Wet Preps

• In order to visualize yeast more easily in vaginal fluid, KOH is used to lyse bacteria and epithelial cells leaving only yeast and their pseudohyphae (long tubular structures produced by some yeast) present.

• Hairs, threads from material and other artifacts can be present in the sample and these can be mistaken for pseudohyphae.

• Not all species of yeast produce pseudohyphae and budding yeast present in the sample must be used to determine if a yeast infection is present. Yeast are much larger than bacteria and are approximately the size and shape of the nuclei of epithelial cells.
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• The following tips can be utilized in order to correctly identify pseudohyphae and yeast in a wet prep.

1. Pseudohyphae must have yeast “budding off” of the tubular structure in order for it to be correctly identified as pseudohyphae. If there are no “buds” present, it is not pseudohyphae.

2. In order for yeast not to be mistaken for amorphous material, they must be “budding”. This form resembles a larger oval with a smaller oval attached at one end. Without the bud, the yeast is indistinguishable from other forms present in vaginal fluid.

Example:
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• Please view the following slides to see these tips utilized.
Artifacts

No yeast budding off of the structures are observed. This cannot be called pseudohyphae.
Note: No budding yeast are observed coming off of the structure. The size is too large and the shape is not consistent with pseudohyphae.

Note: Please note the size of the epithelial cells in relation to the actual pseudohyphae and the artifact.
This structure is more than likely pseudohyphae, but if this was by itself in the wet mount, it should not be called positive for pseudohyphae because there are no buds coming off of it.

Pseudohyphae

Note: All of the budding structures coming off.
Pseudohyphae

Bud
Artifact

Structure is too large and the shape is not consistent with pseudohyphae.
Artifact

No budding yeast
Epithelial

Pseudohyphae

Bud

Epithelial
Note: These are “probably” yeast, but cannot be called so because they are not budding.