

*Interpretation of Fine Needle Aspiration  
By  
Pattern Recognition*

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*FNA Interpretation  
By Pattern Recognition*

**Micro-architectural Patterns**

- Monomorphic Epithelial patterns
- Dimorphic patterns (Two Cell Types)
- Single cell patterns
- Background
- Unique Cells

## *FNA Interpretation By Pattern Recognition*



- Clues

## *FNA Interpretation By Pattern Recognition*



- **Monomorphic Epithelial Patterns:**
  - Non-complex Tissue Fragments
  - Complex Tissue Fragments
  - Three Dimensional Cell Clusters

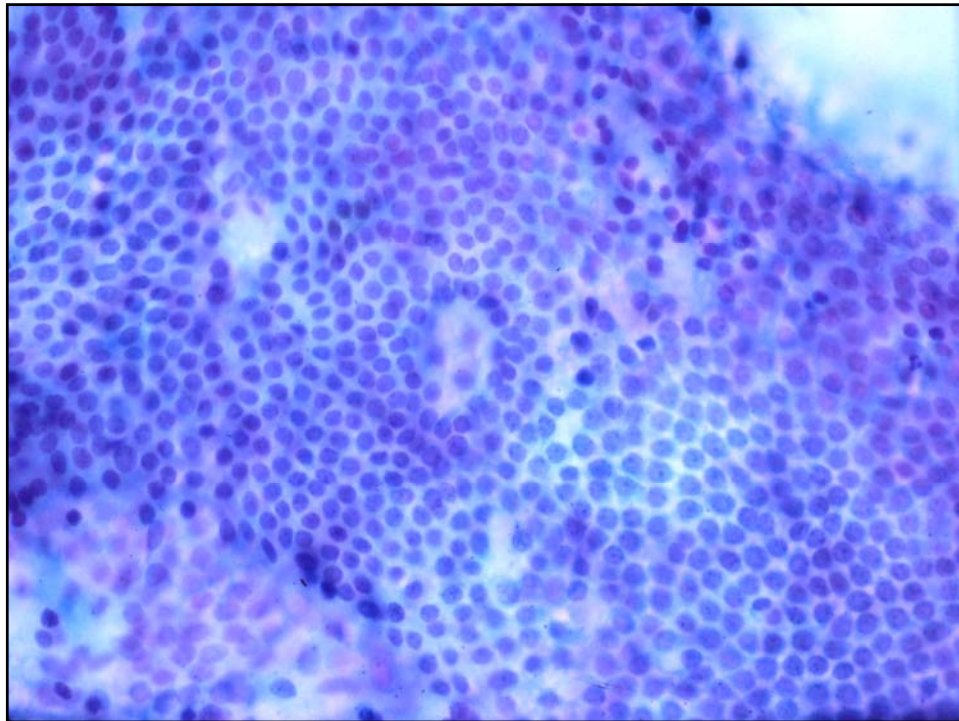
## *FNA Interpretation By Pattern Recognition*

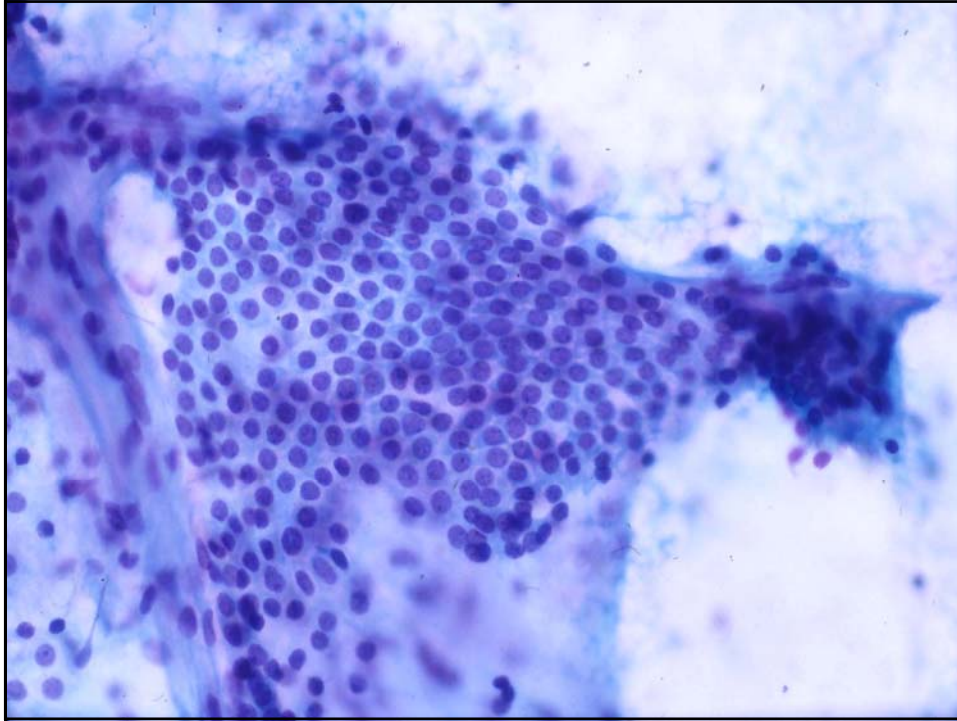
- **Monomorphic Patterns:**

- Non-complex Epithelial Tissue Fragments



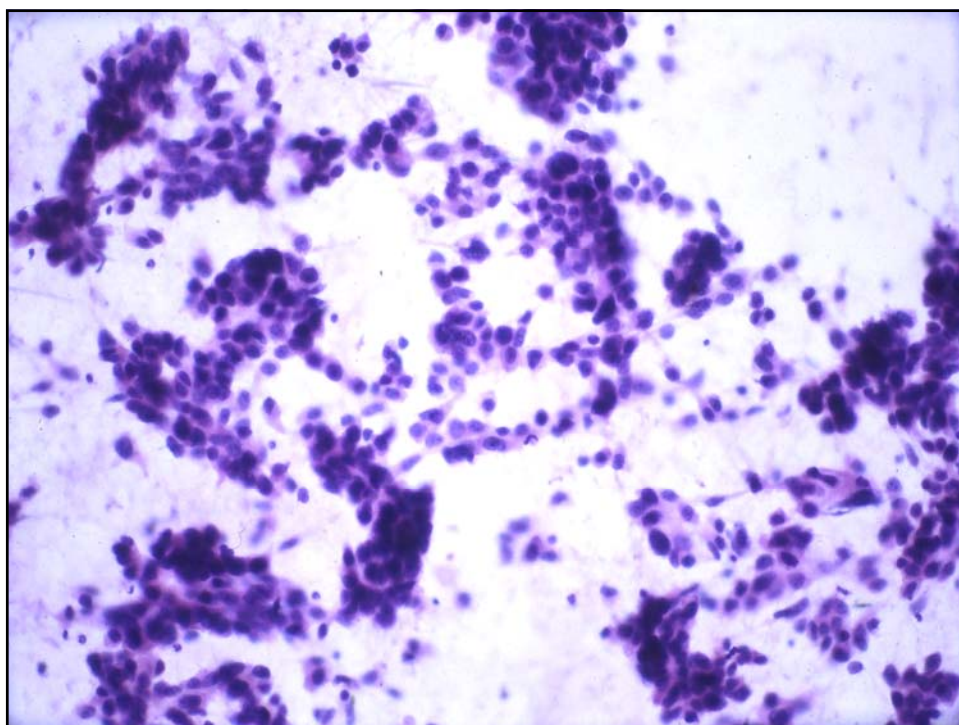
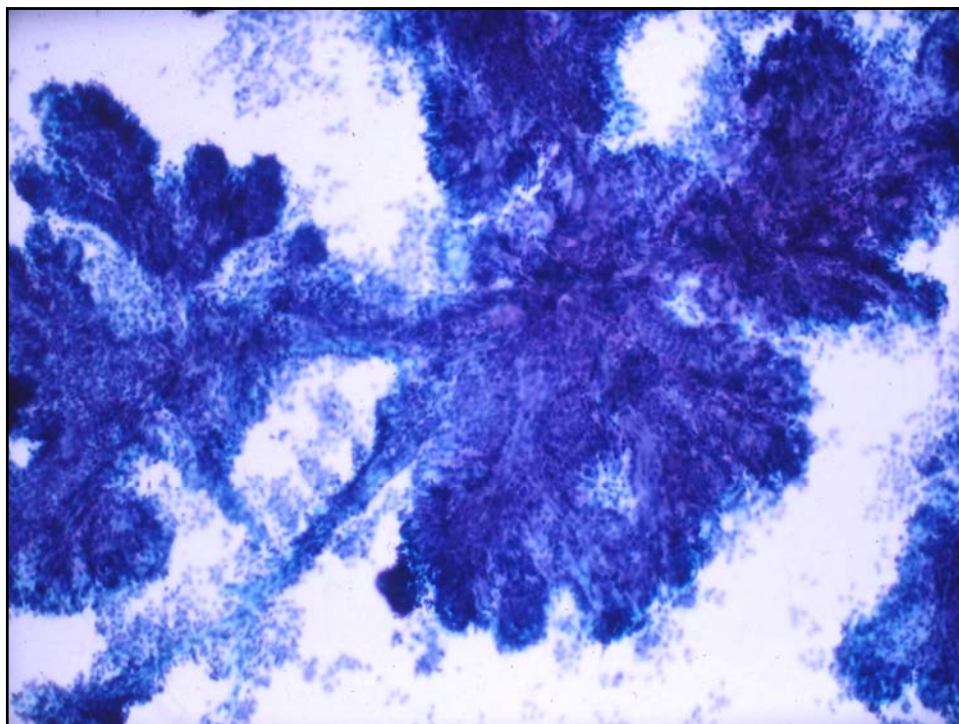
(monolayer sheets)

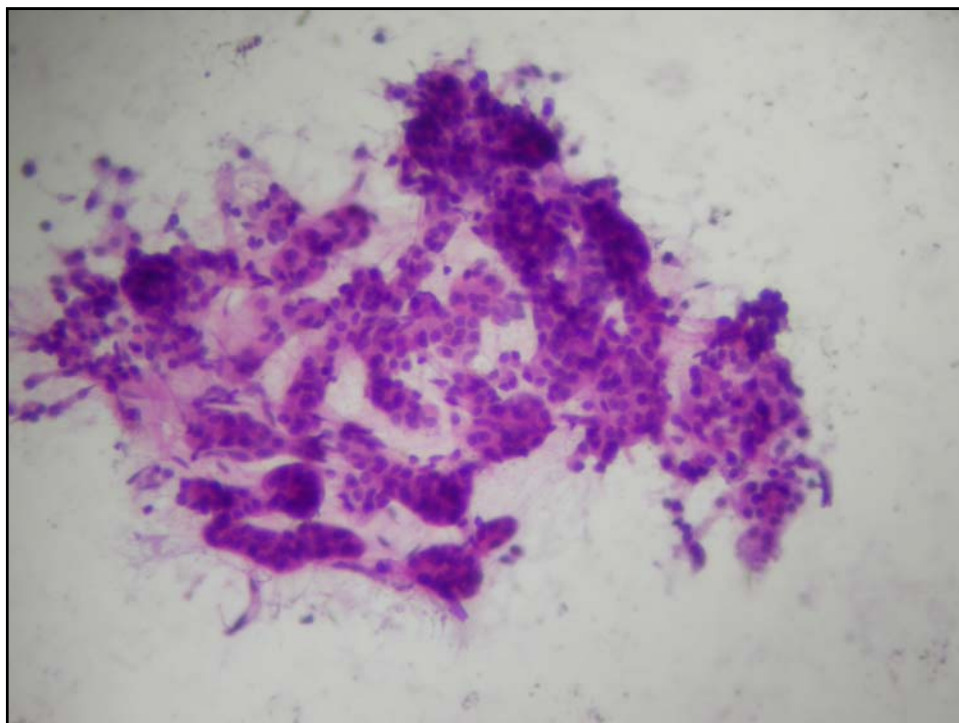
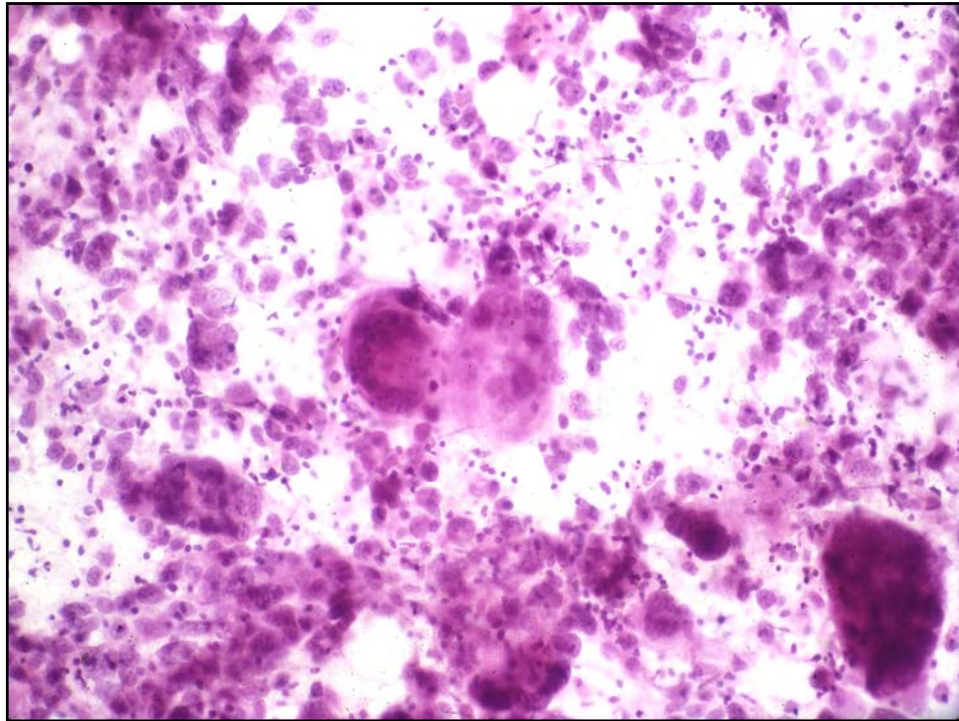




## *FNA Interpretation By Pattern Recognition*

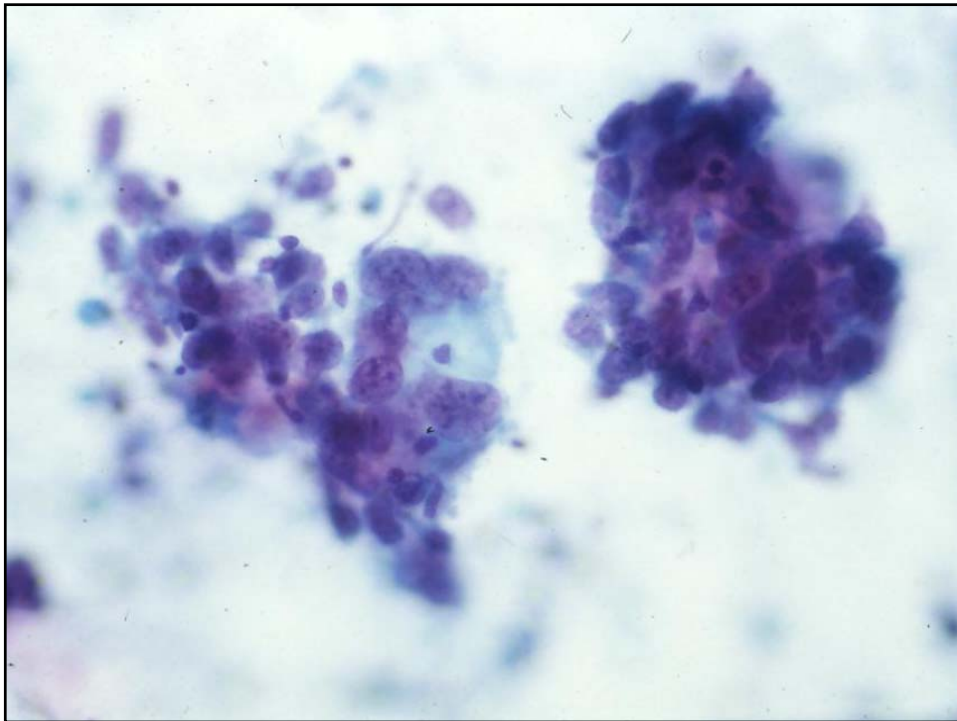
- **Monomorphic Patterns:**
  - Complex Epithelial Tissue Fragments

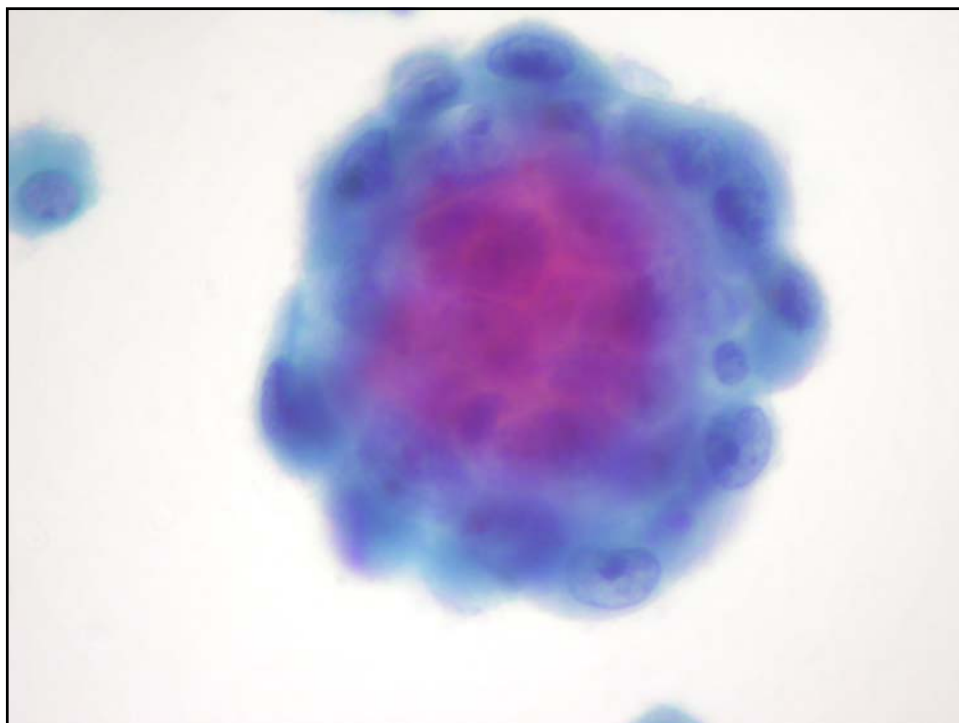
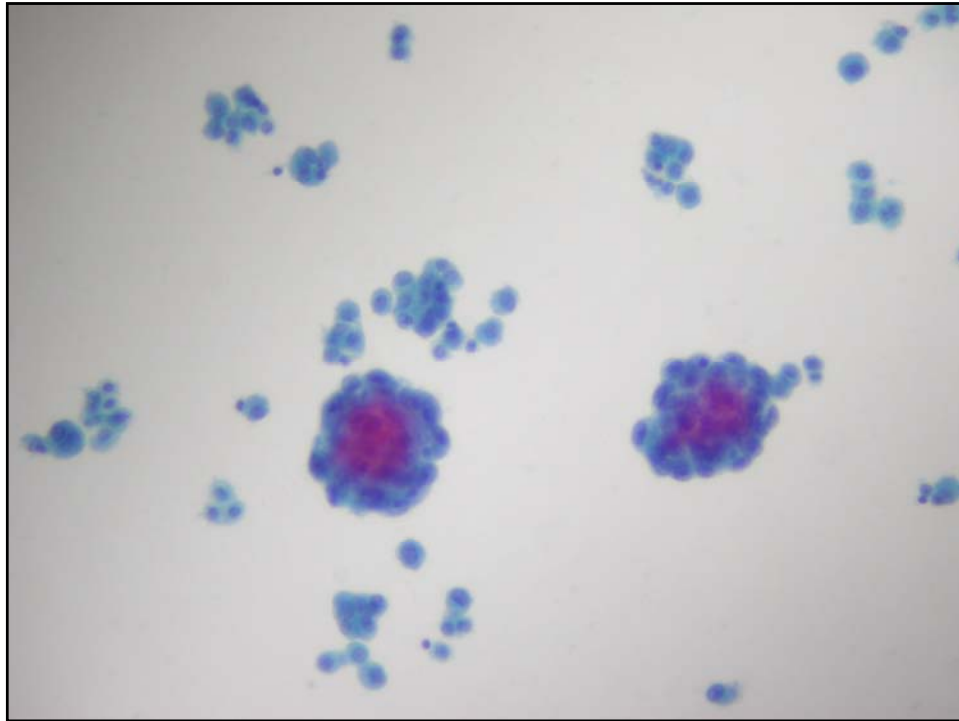




## *FNA Interpretation By Pattern Recognition*

- **Monomorphic Patterns:**
  - Three Dimensional Cell Clusters



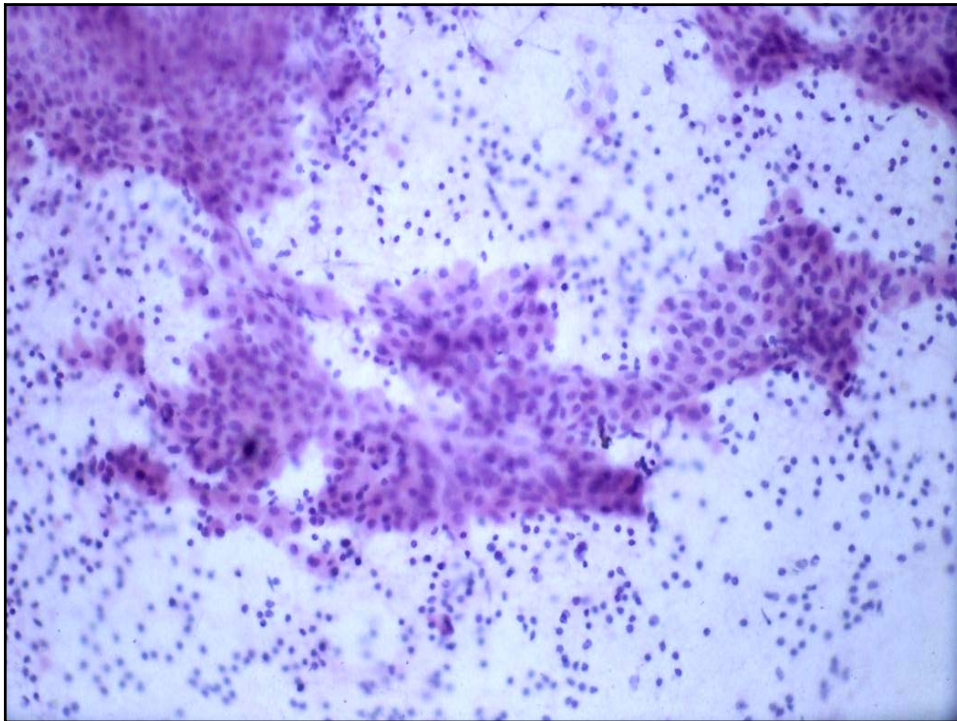


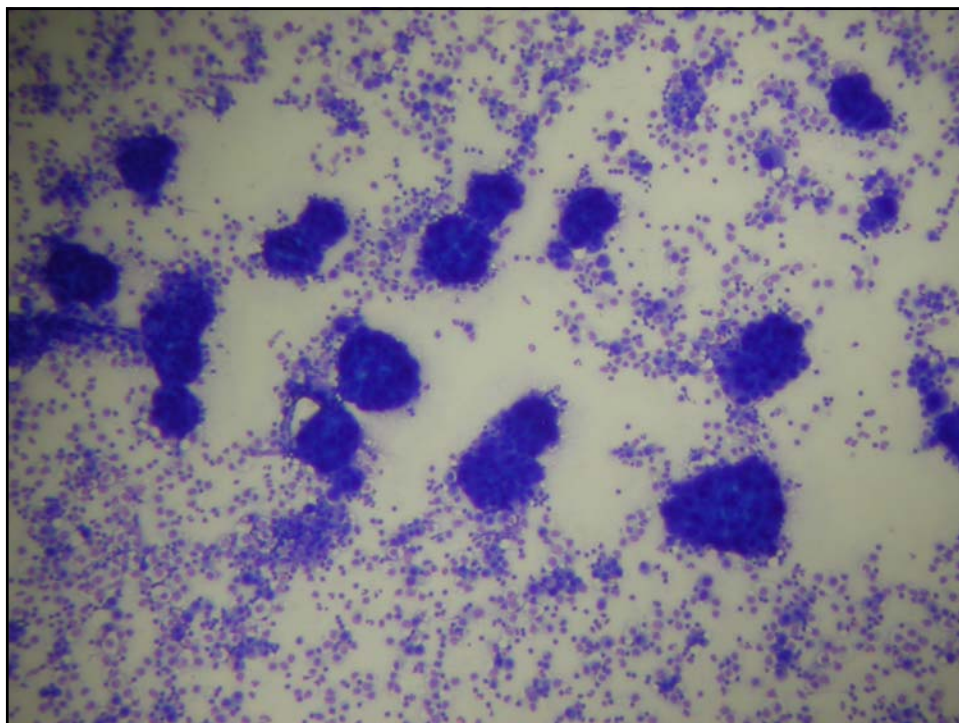
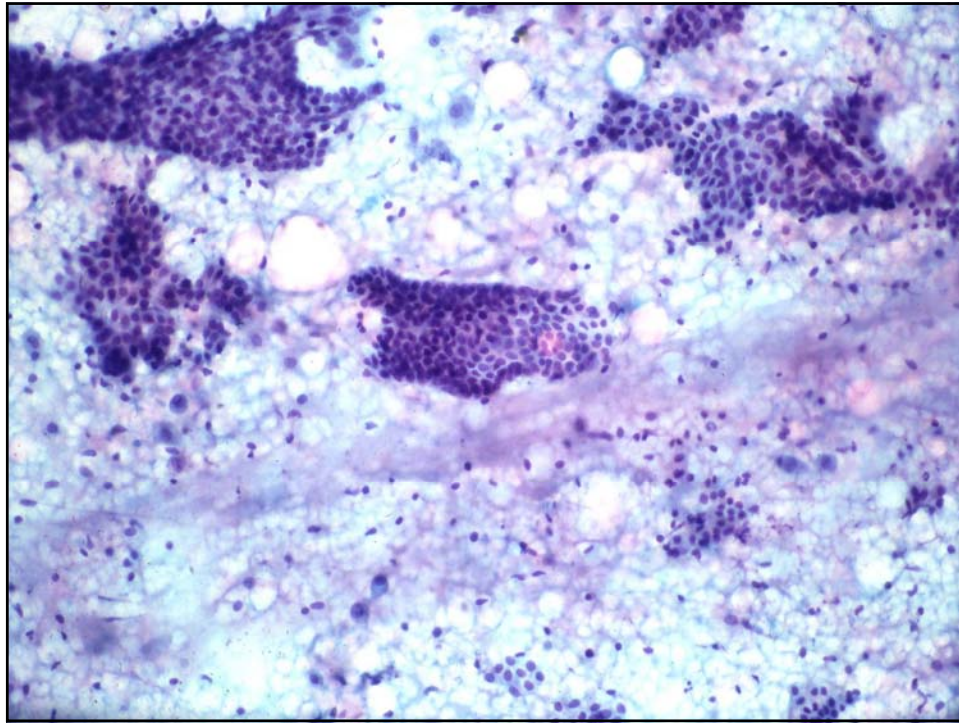


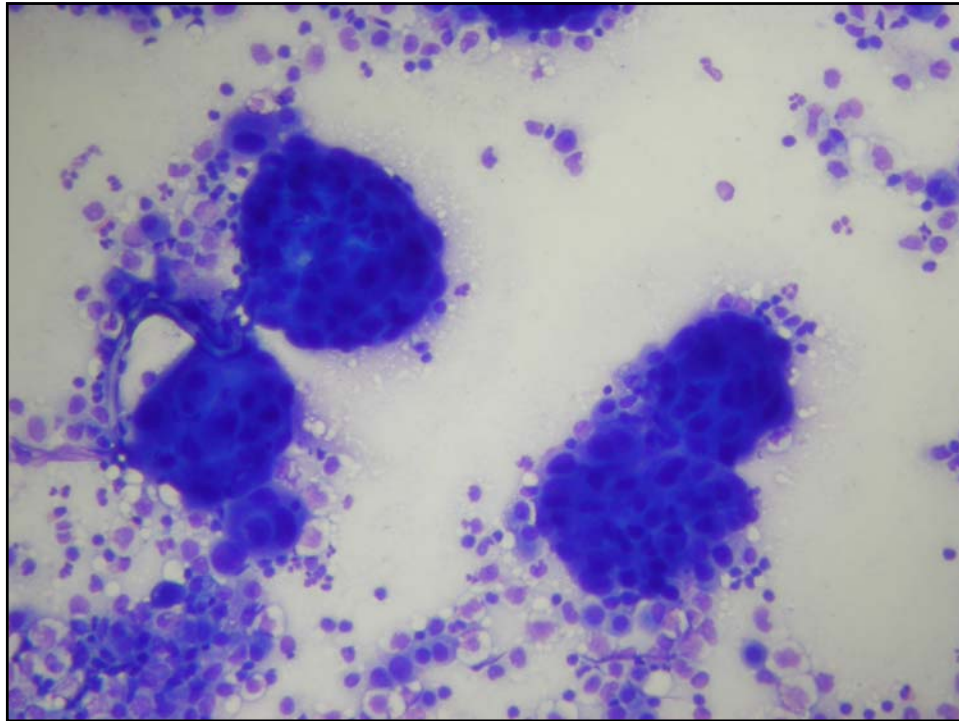
## *FNA Interpretation By Pattern Recognition*

- **Dimorphic Patterns:**

Usually Epithelial Cells & Other Cell Type in the Background







## *FNA Interpretation By Pattern Recognition*

- **Single cell Patterns:**

Monomorphic

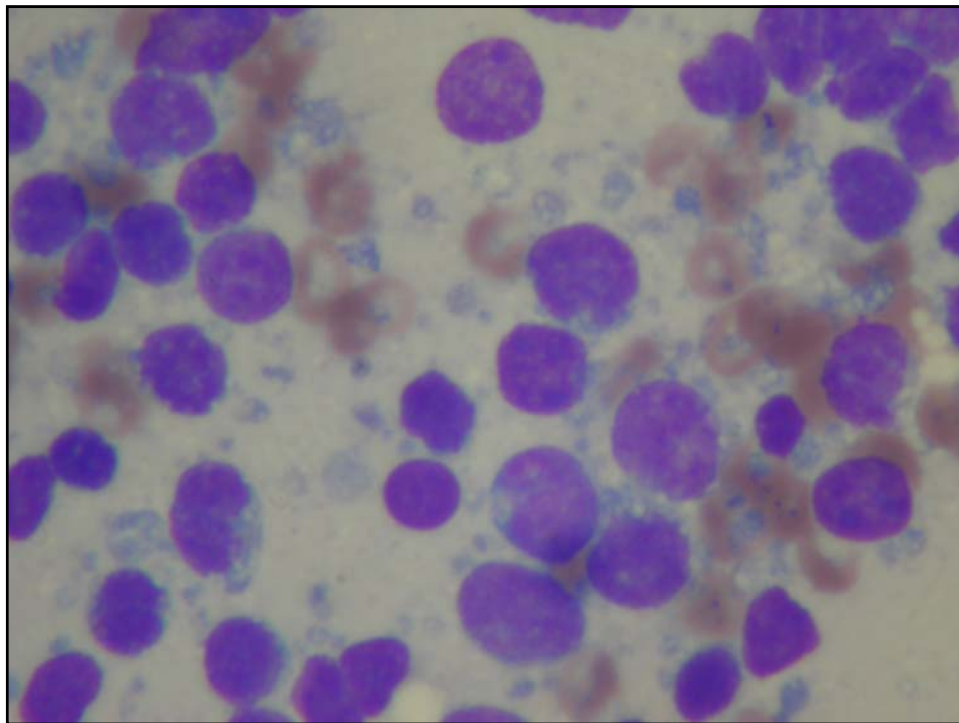
Polymorphic

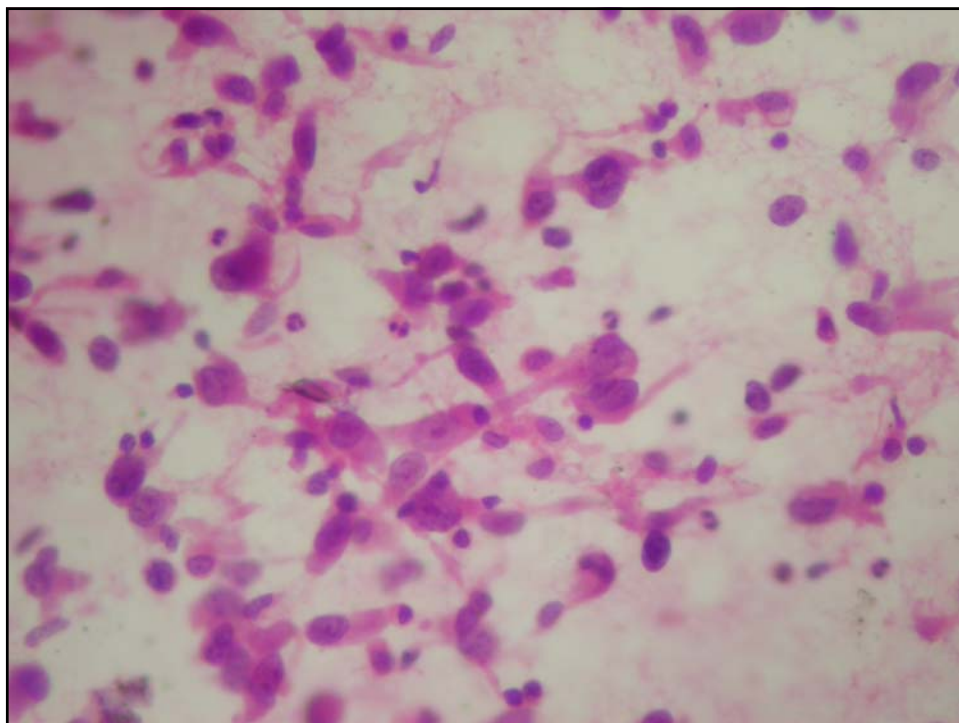
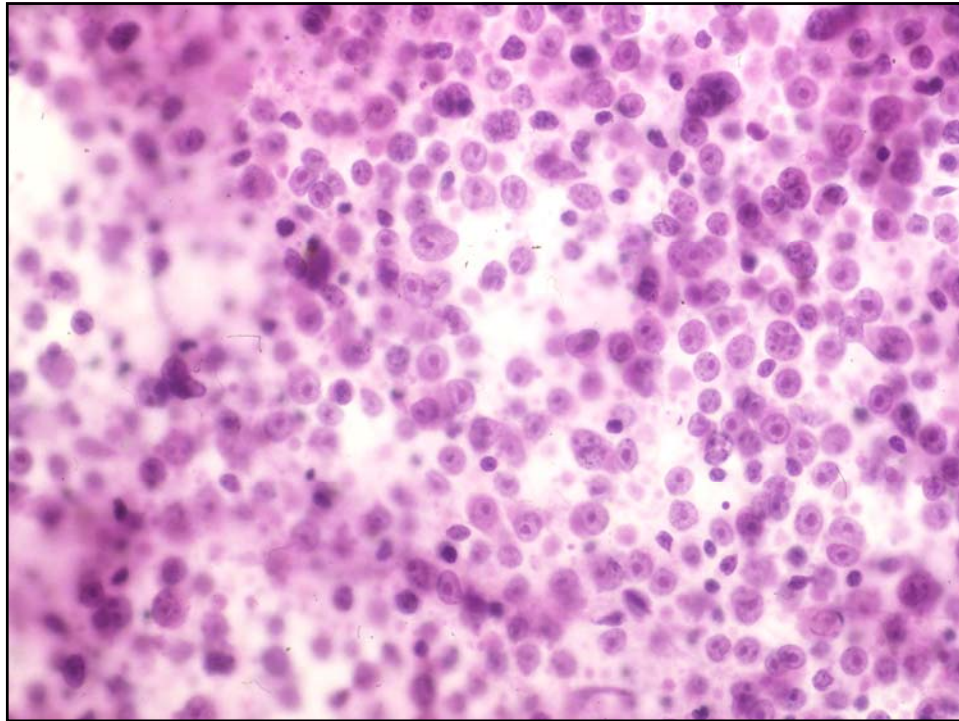
*FNA Interpretation  
By Pattern Recognition*

- **Single Cell Pattern**



**Monomorphic**



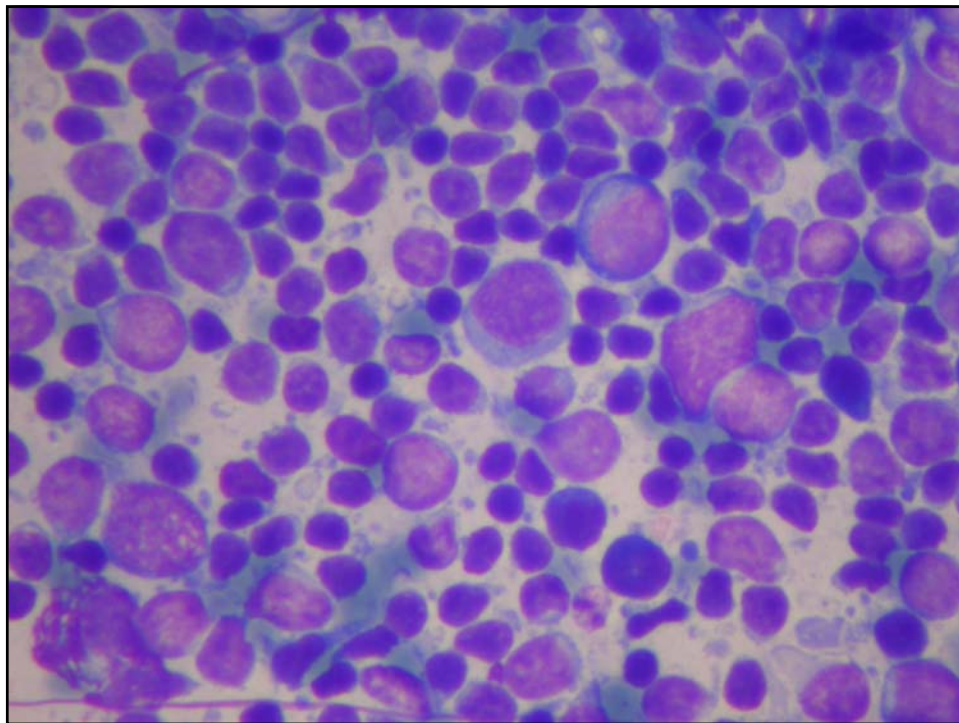


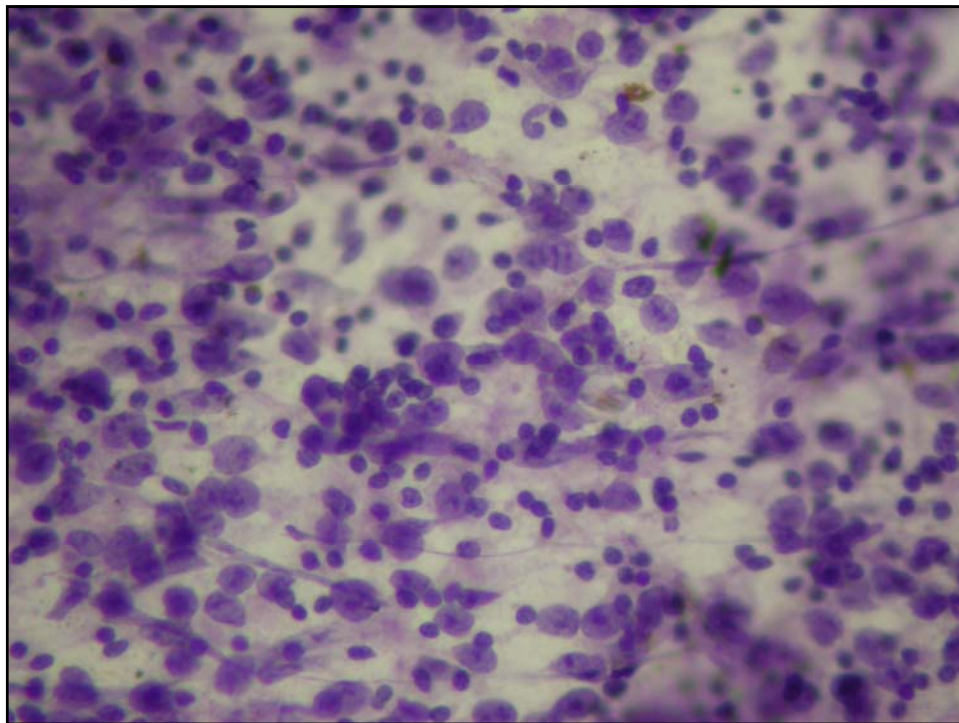
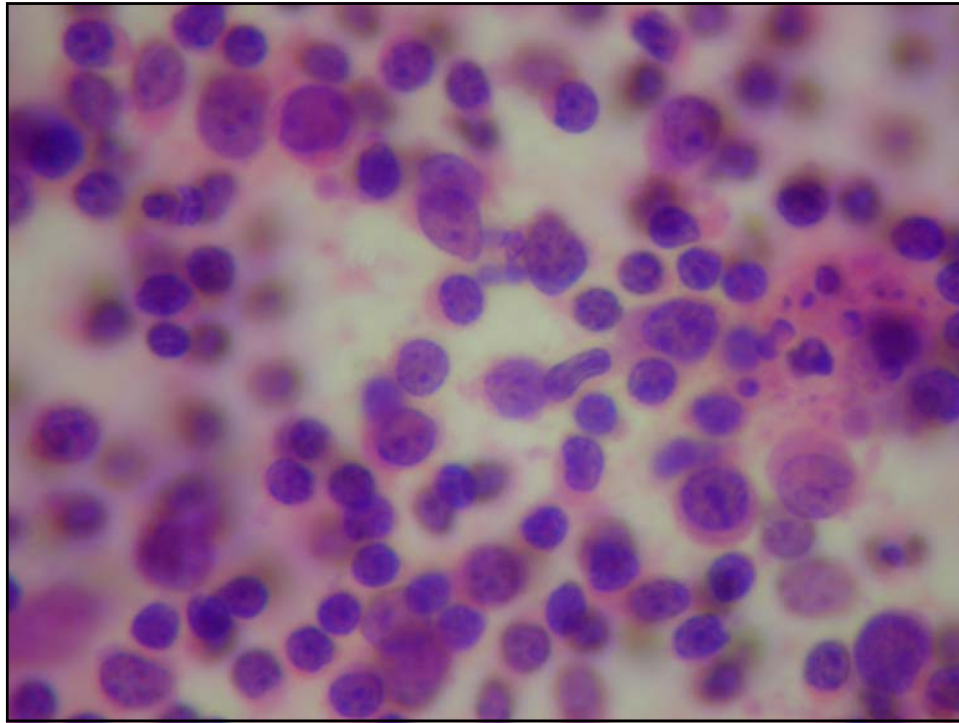
*FNA Interpretation  
By Pattern Recognition*

- **Single Cell Pattern**



**Polymorphic**

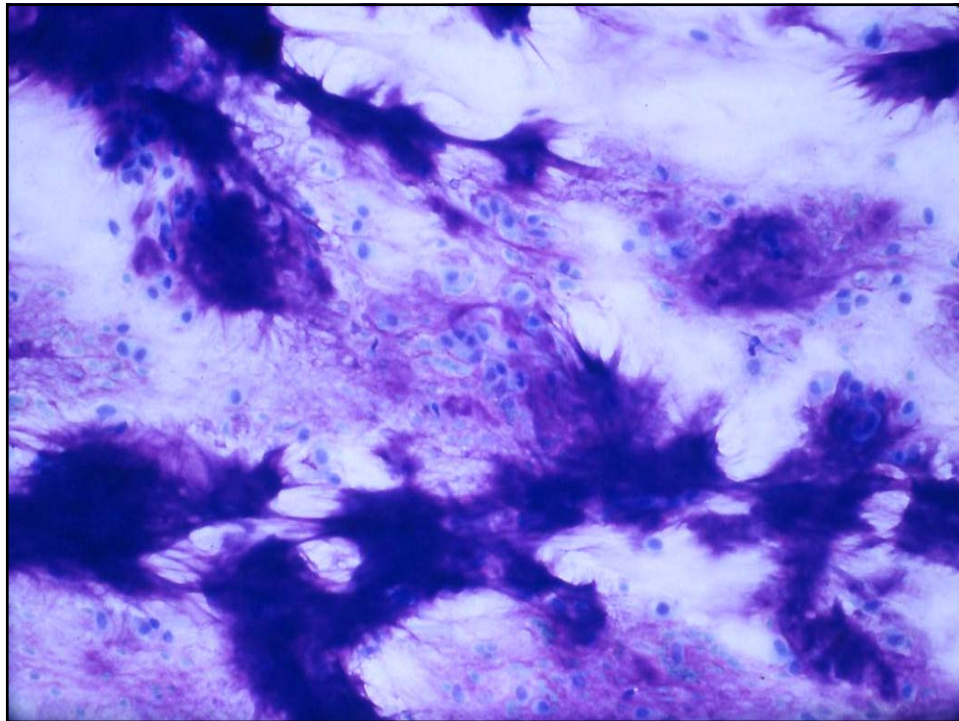




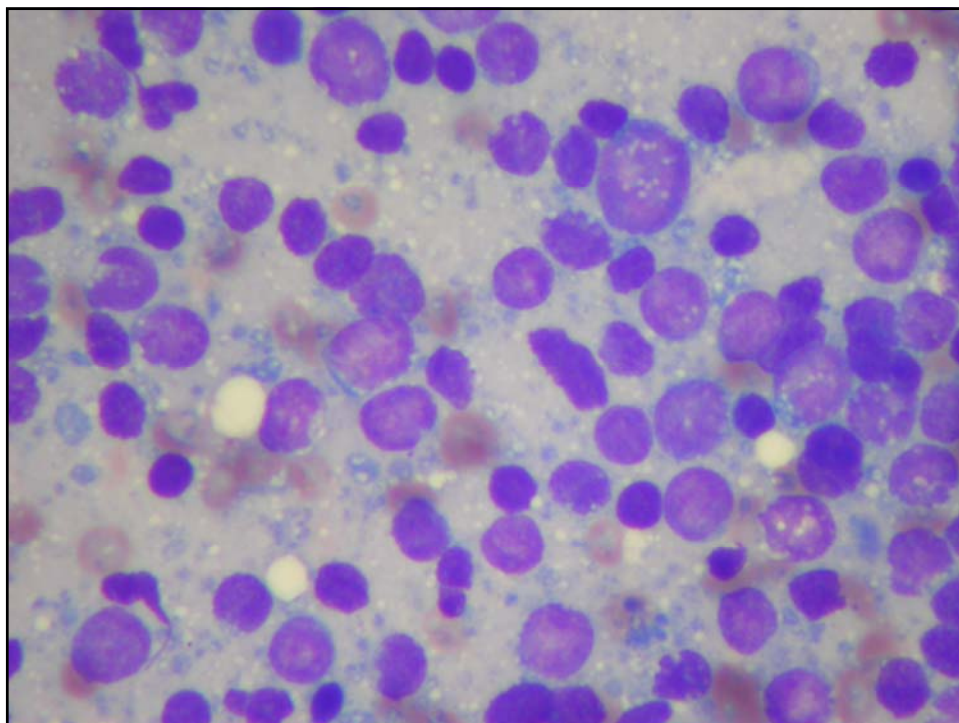
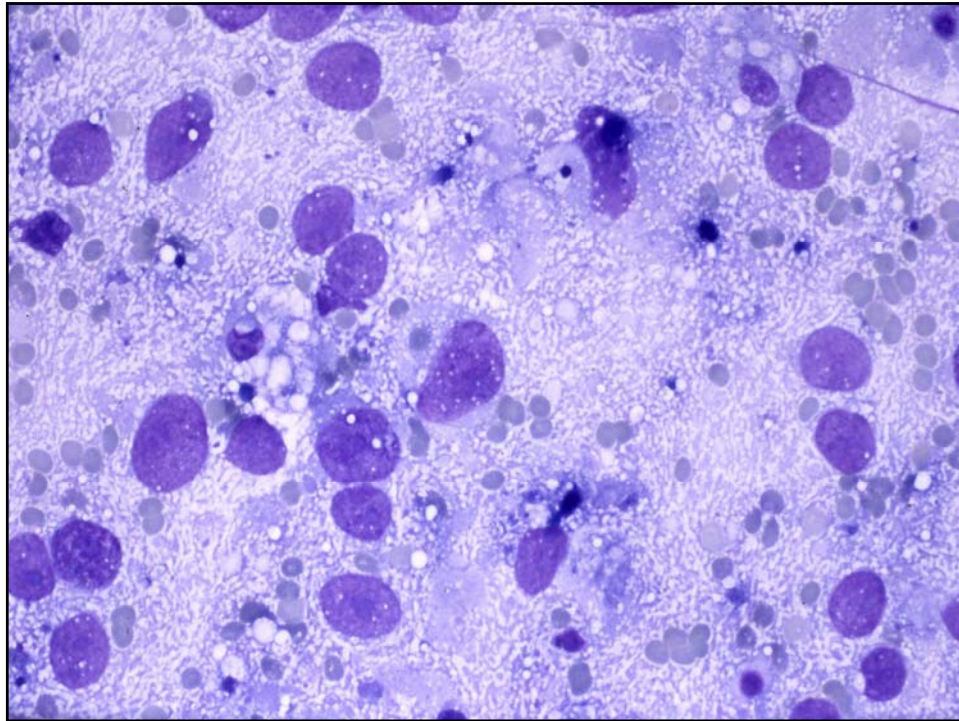
## *FNA Interpretation By Pattern Recognition*

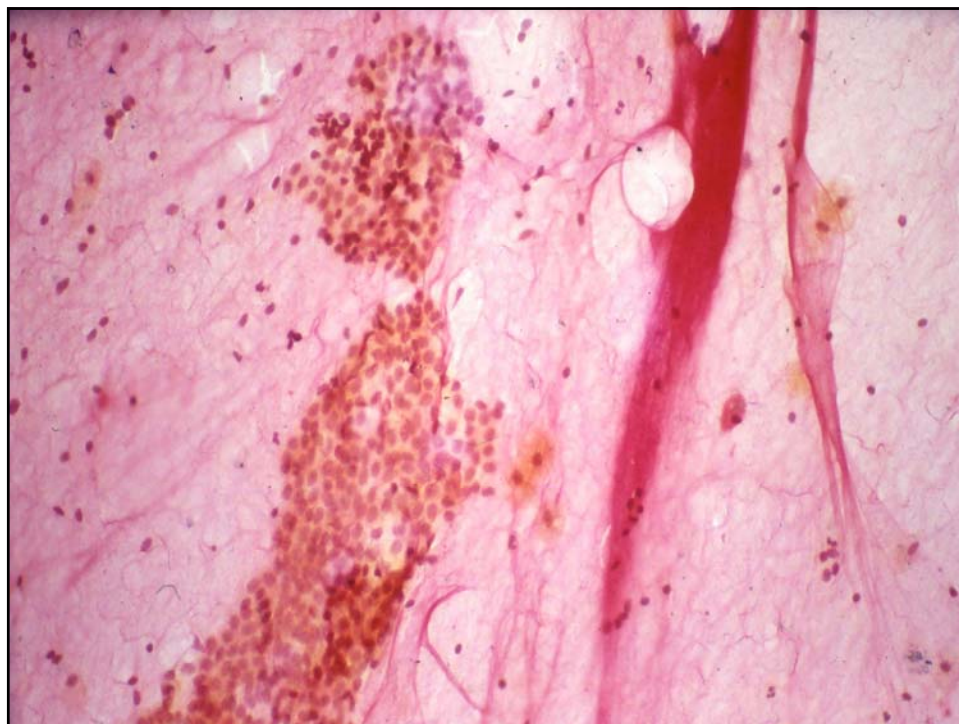
- **Background**

**Necrosis, background Substance or Pattern**



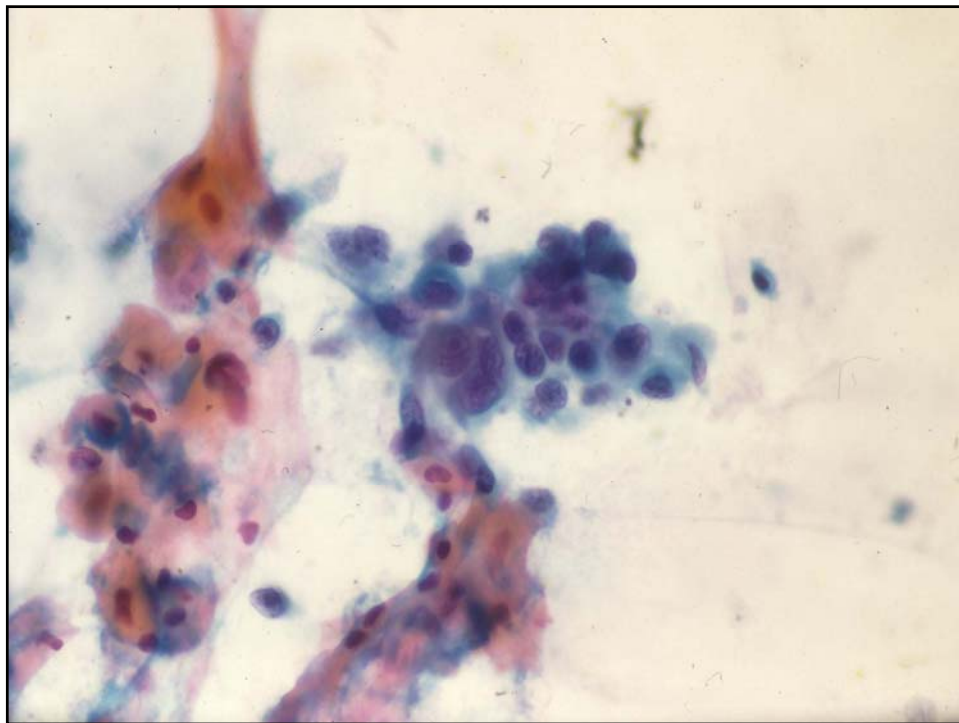
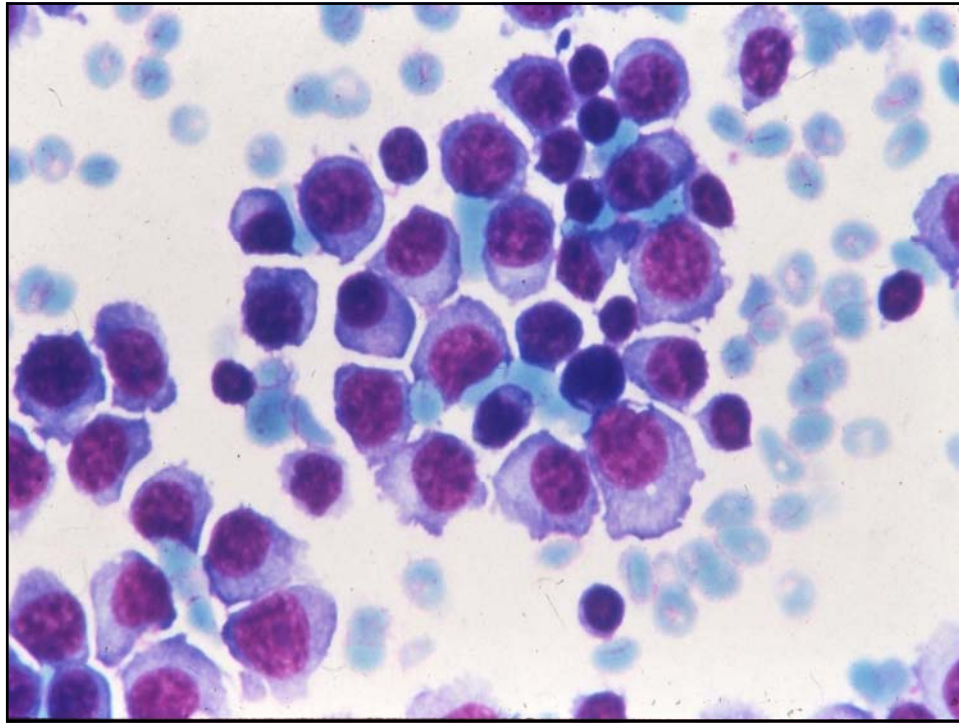


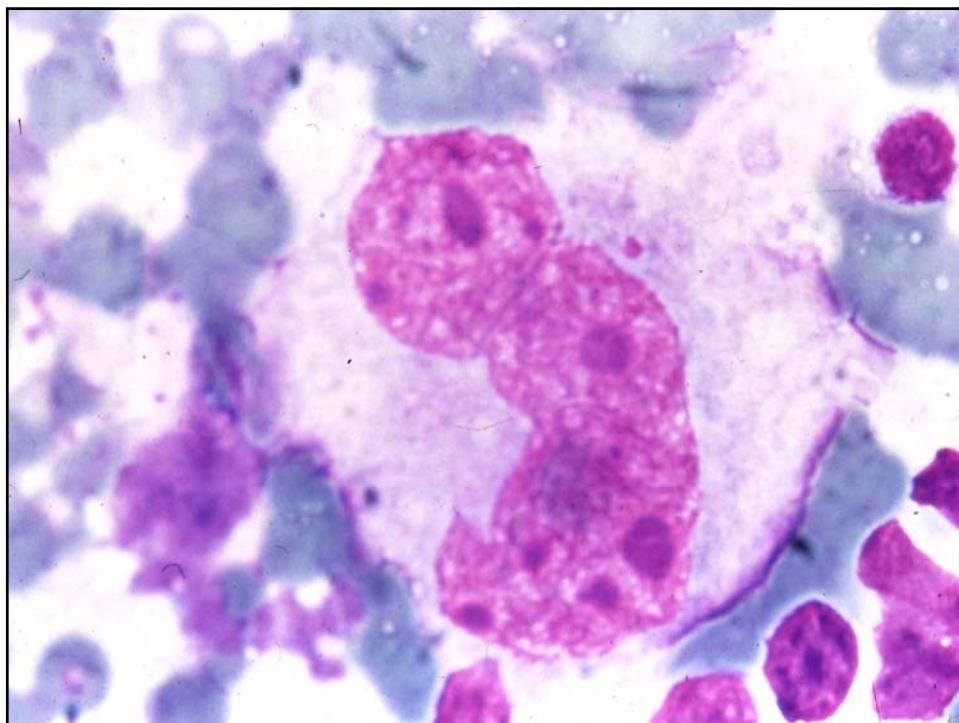
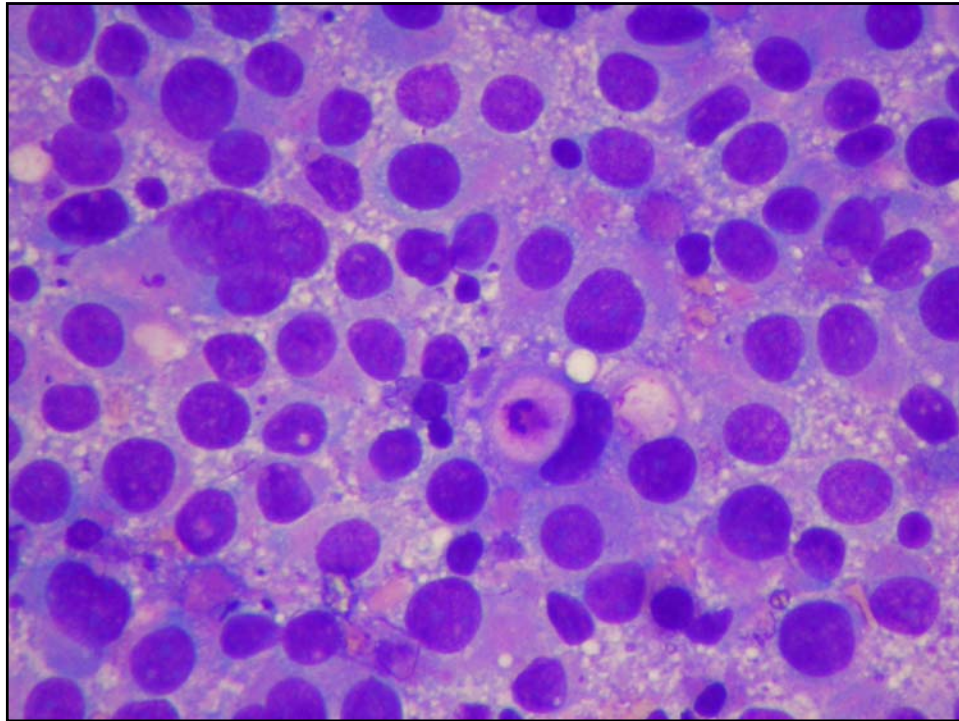


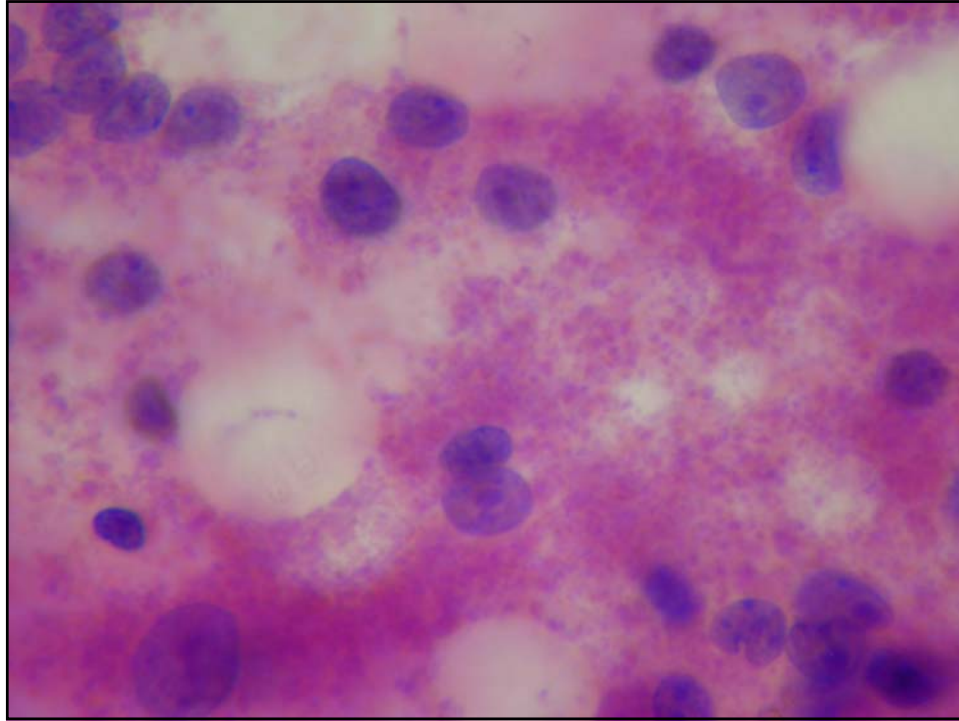


## *FNA Interpretation By Pattern Recognition*

- **Unique Cells**







## *FNA Interpretation By Pattern Recognition*

- **Monomorphic Patterns:**
  - **Single Cell Pattern DD:**
    - Carcinoma (Breast, Neuroendocrine & Small Cell)
    - Lymphoma & Reactive Lymph Nodes
    - Melanoma
    - Seminoma
    - Sarcoma

## *FNA Interpretation By Pattern Recognition*

- Monomorphic Patterns:
- Non-complex & **Complex Epithelial Tissue Fragments**



Benign



**Malignant Epithelial Tumors**

## *FNA Interpretation By Pattern Recognition*

- Monomorphic Patterns:
- Three Dimensional Cell Clusters



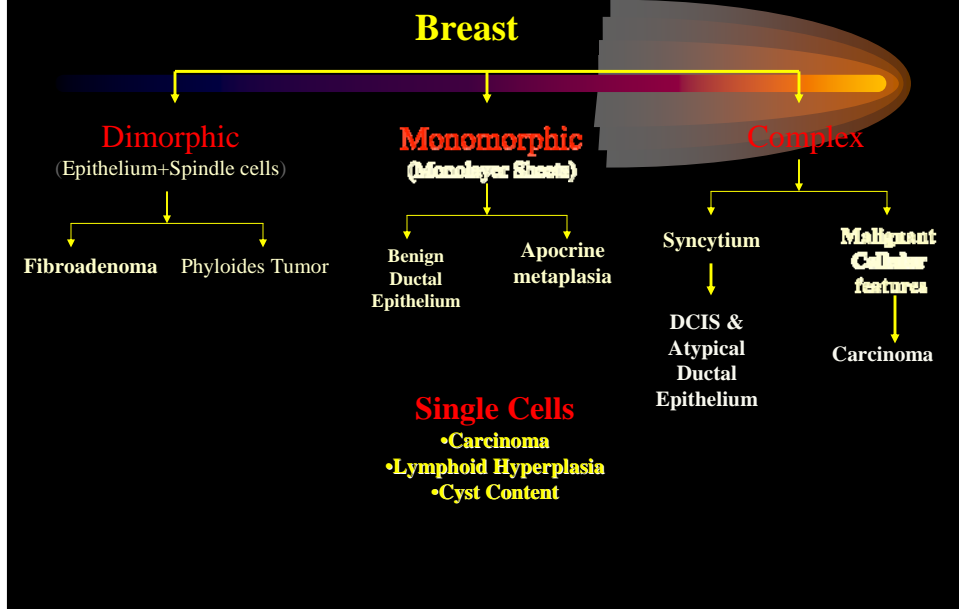
Malignant & Atypical Epithelial Tumors

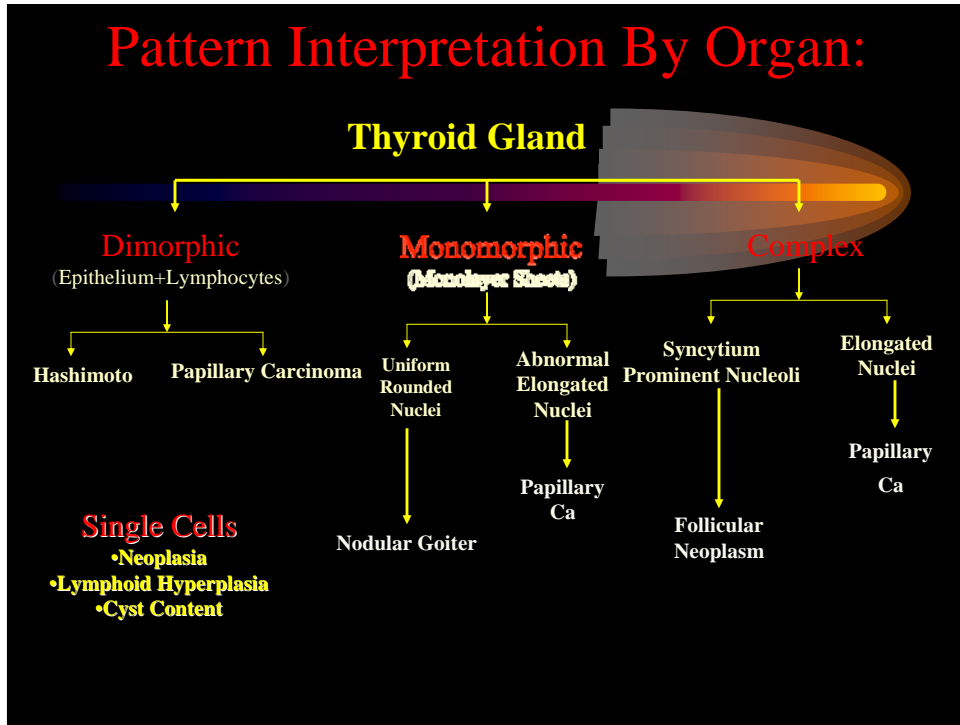
## *FNA Interpretation By Pattern Recognition*

- **Pattern Interpretation By Organ:**

- Breast
- Thyroid
- Lymph Node
- Salivary Gland
- Soft Tissue

## **Pattern Interpretation By Organ:**

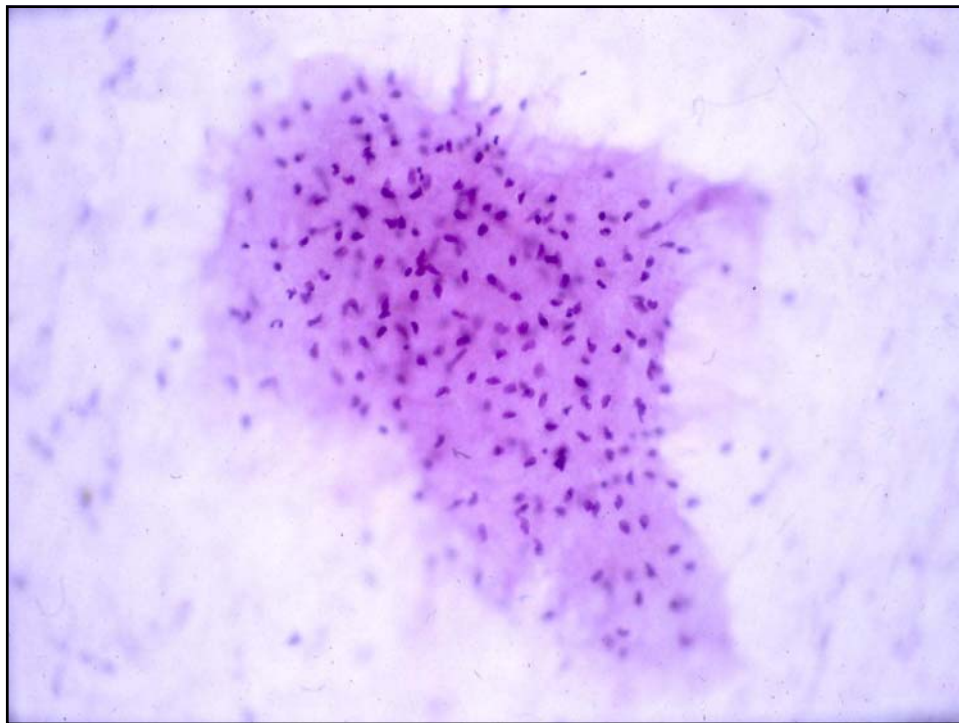
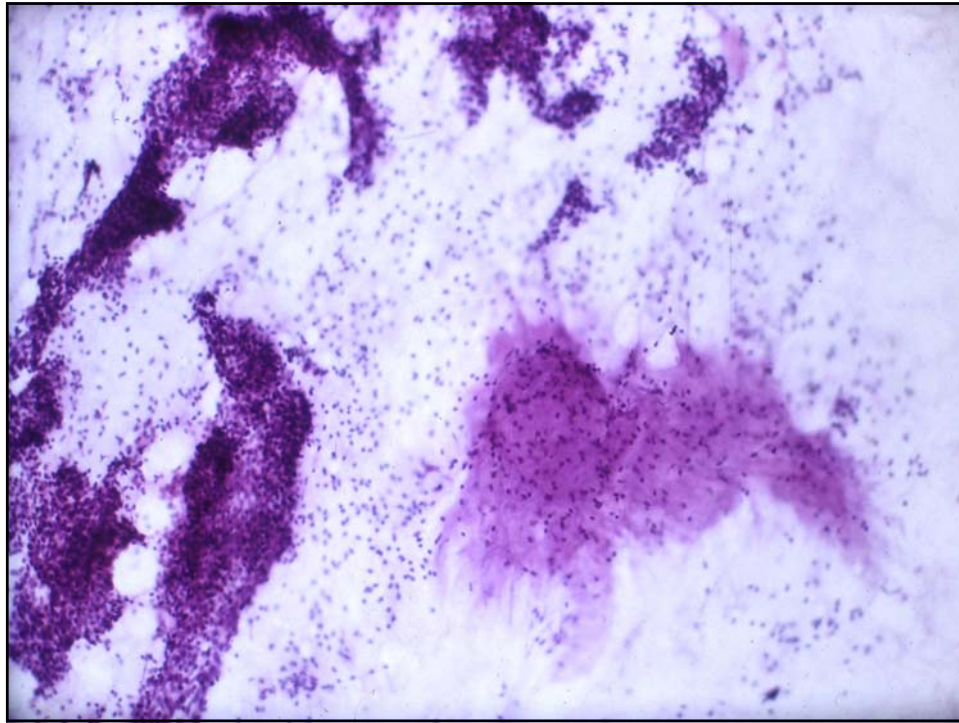


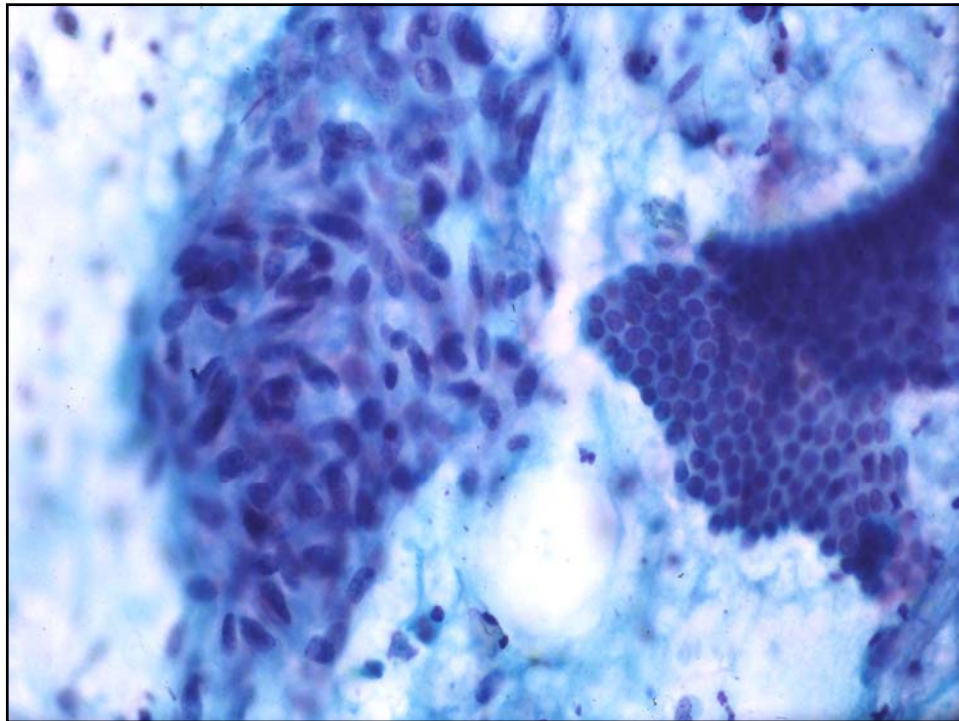
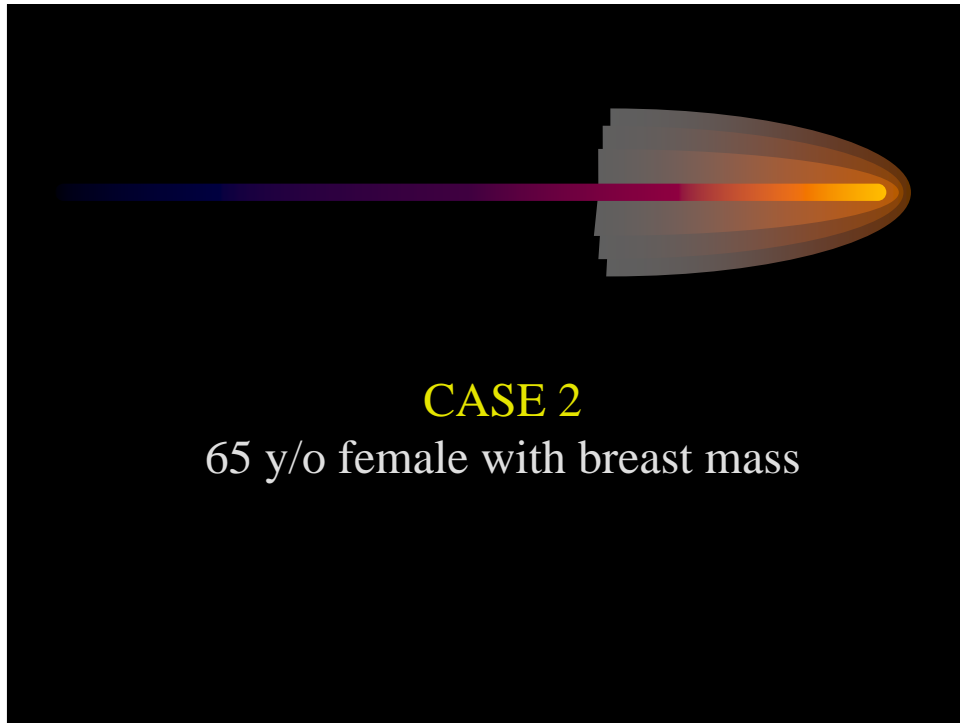


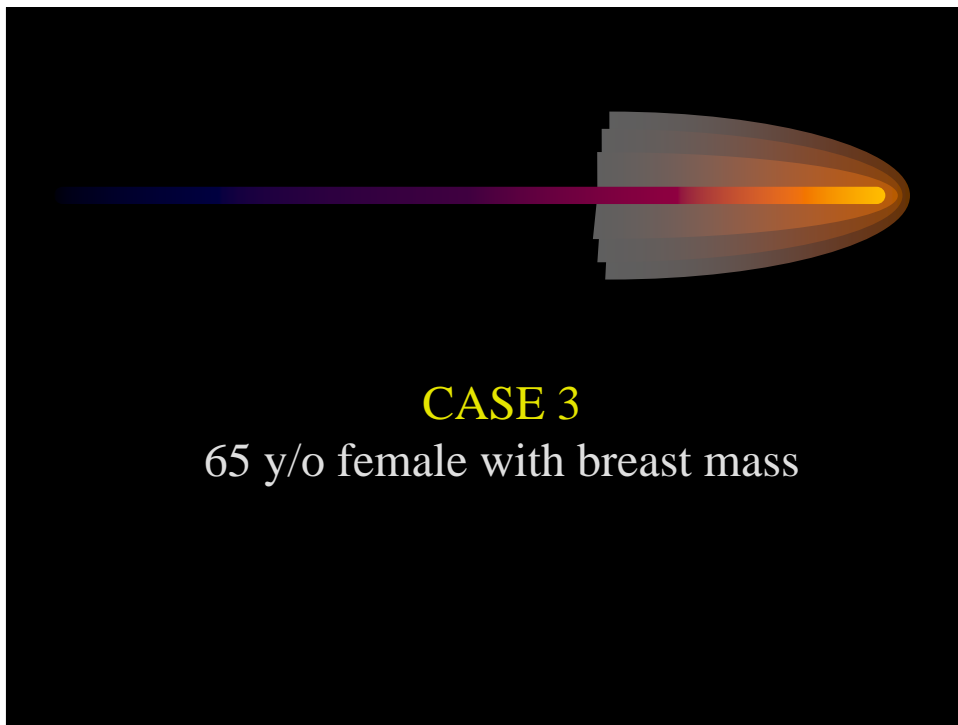
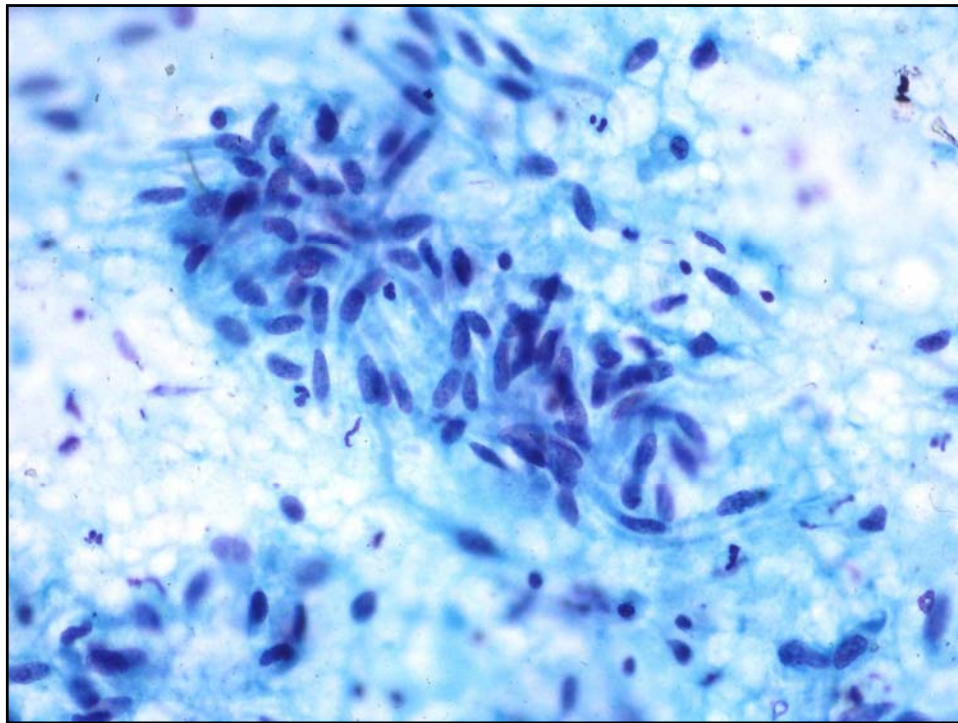
### CASE 1

25 y/o female with breast mass



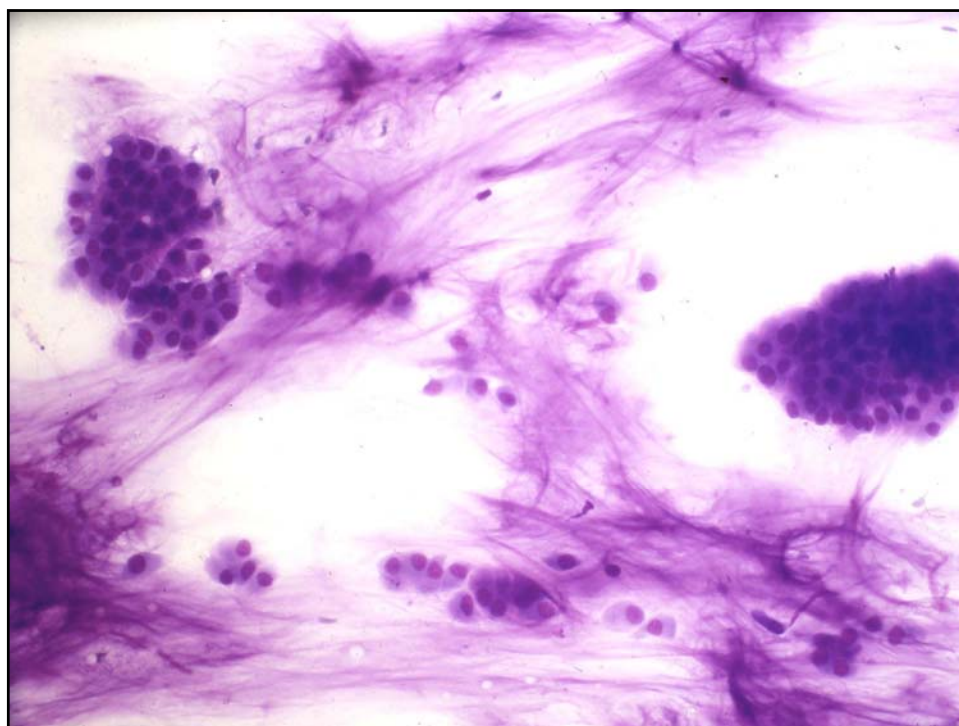


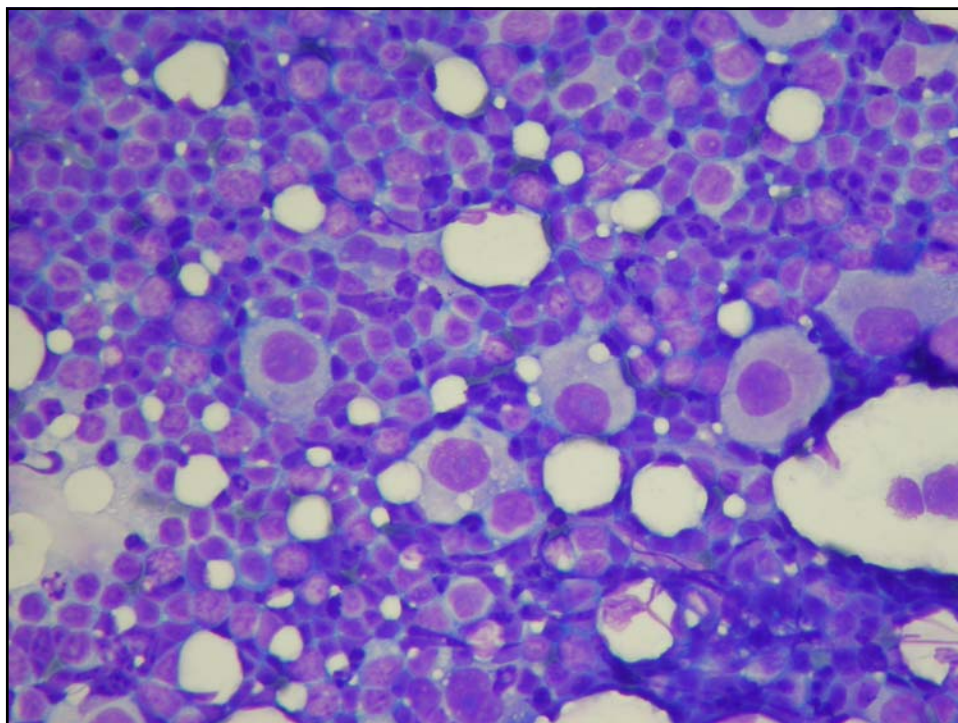
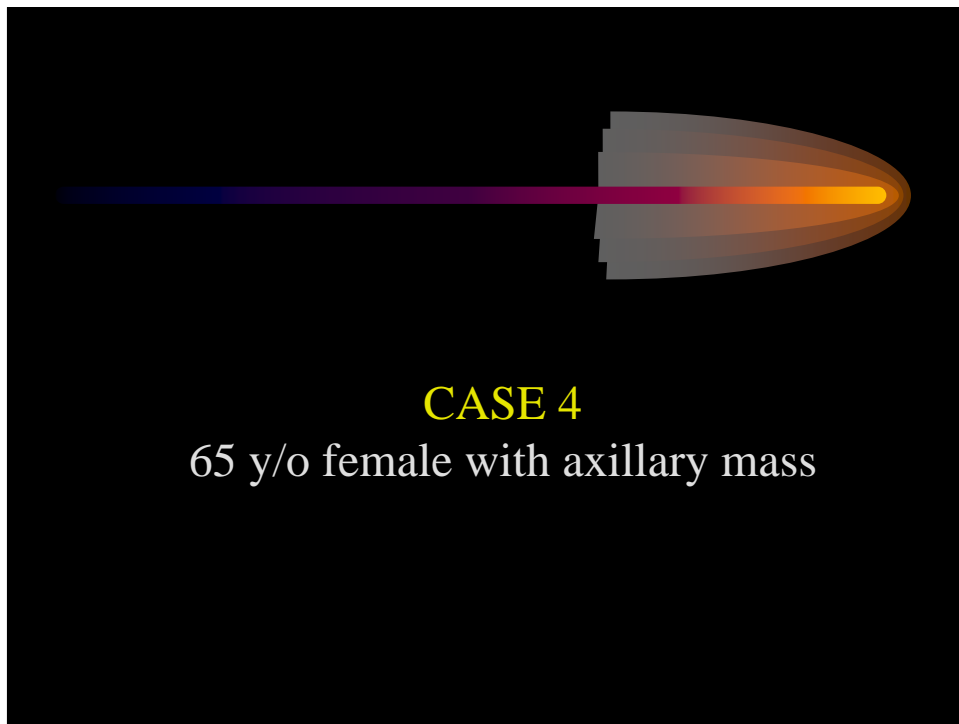


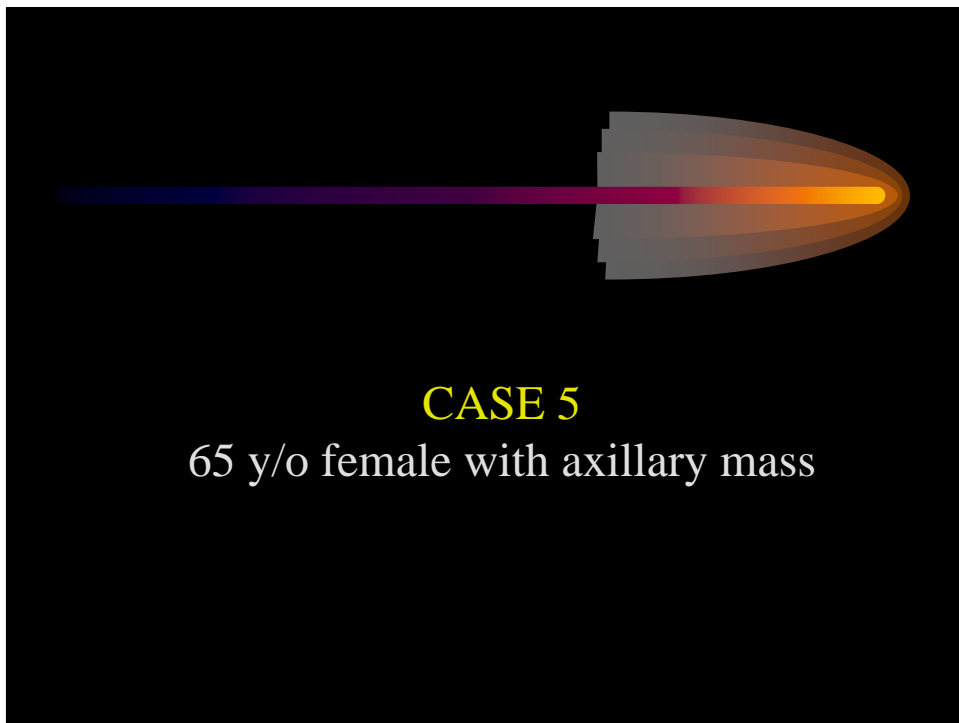
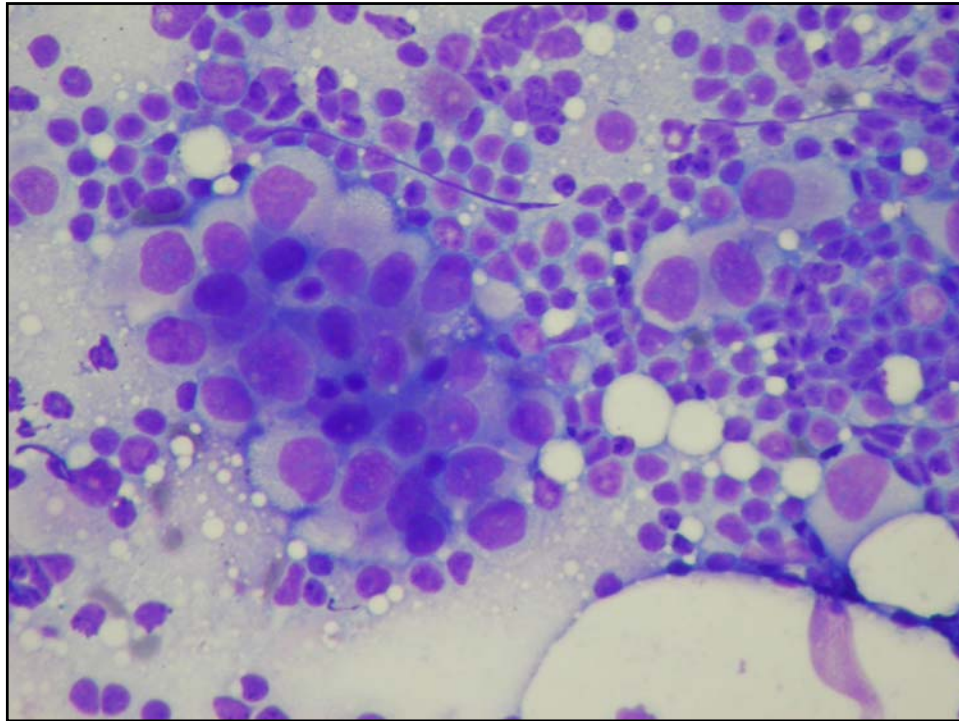


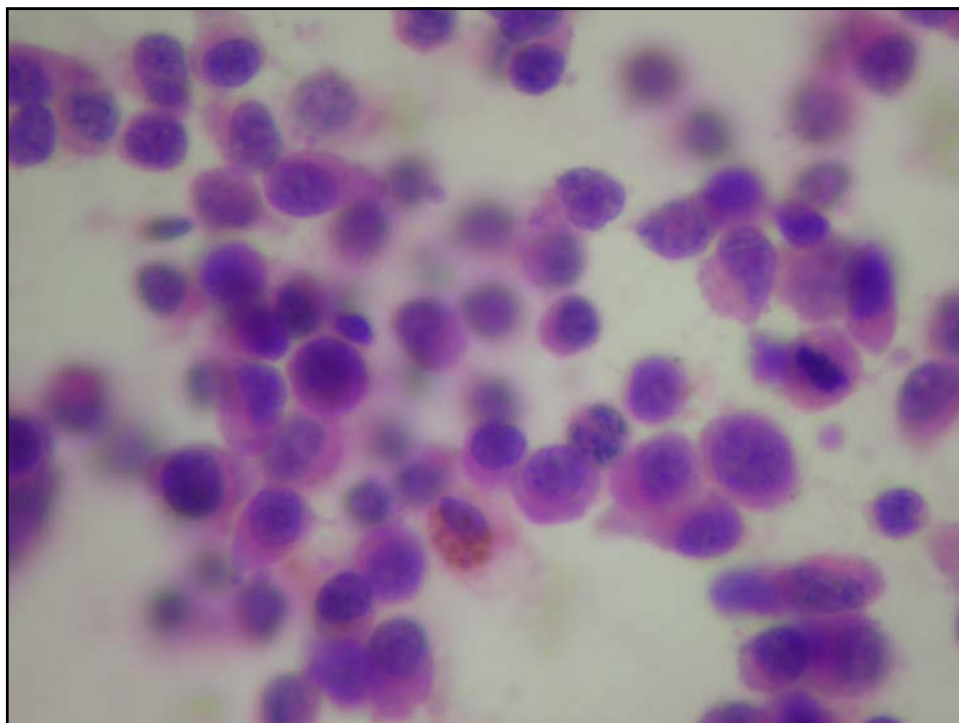
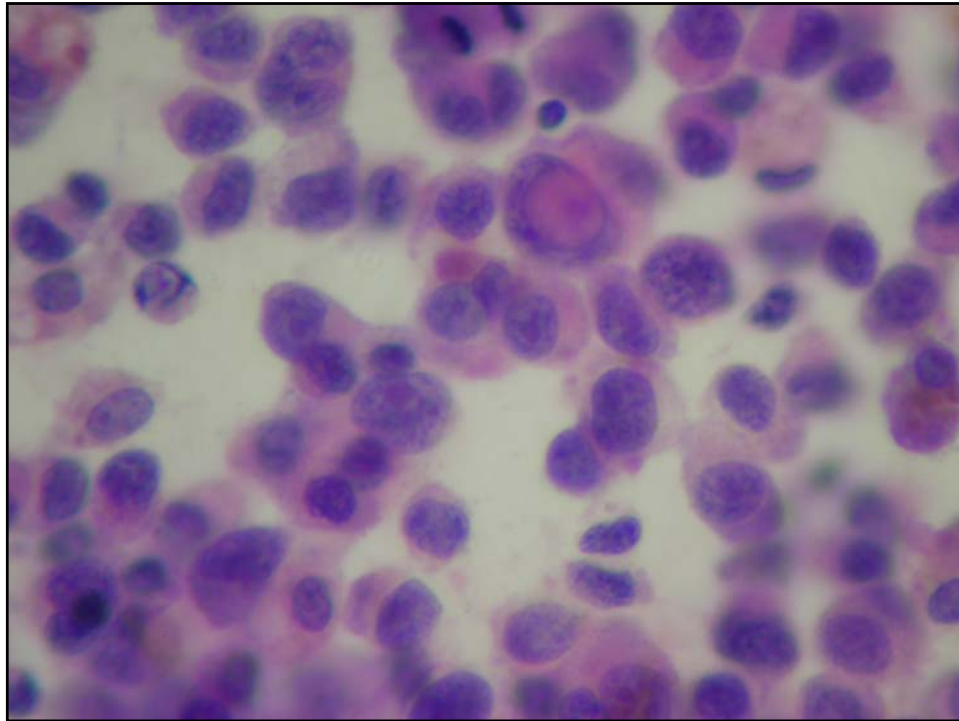
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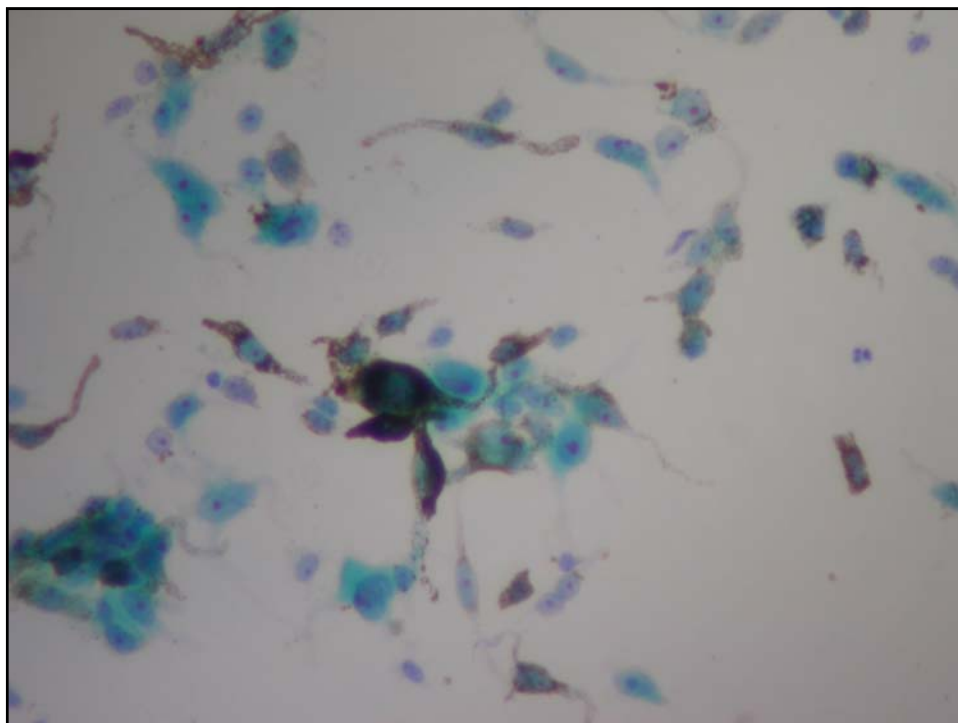
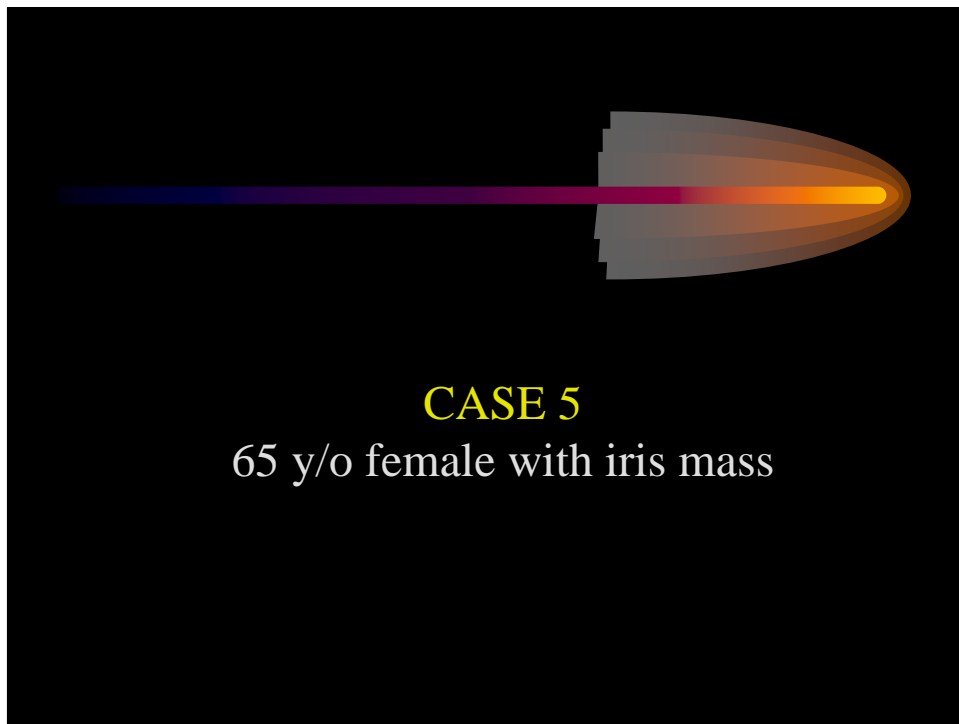
65 y/o female with breast mass



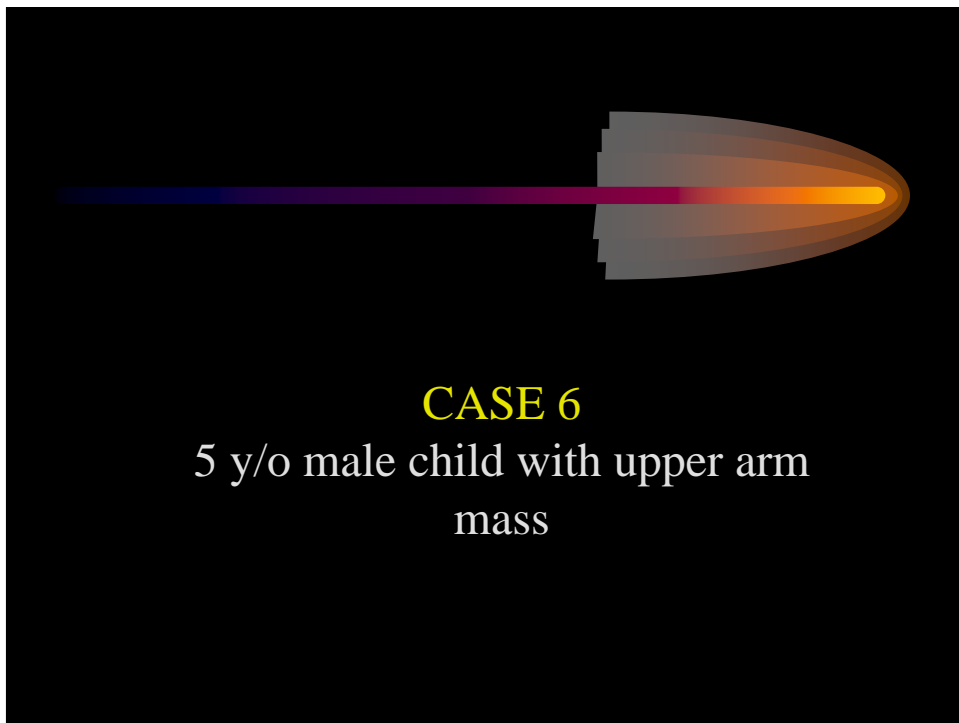
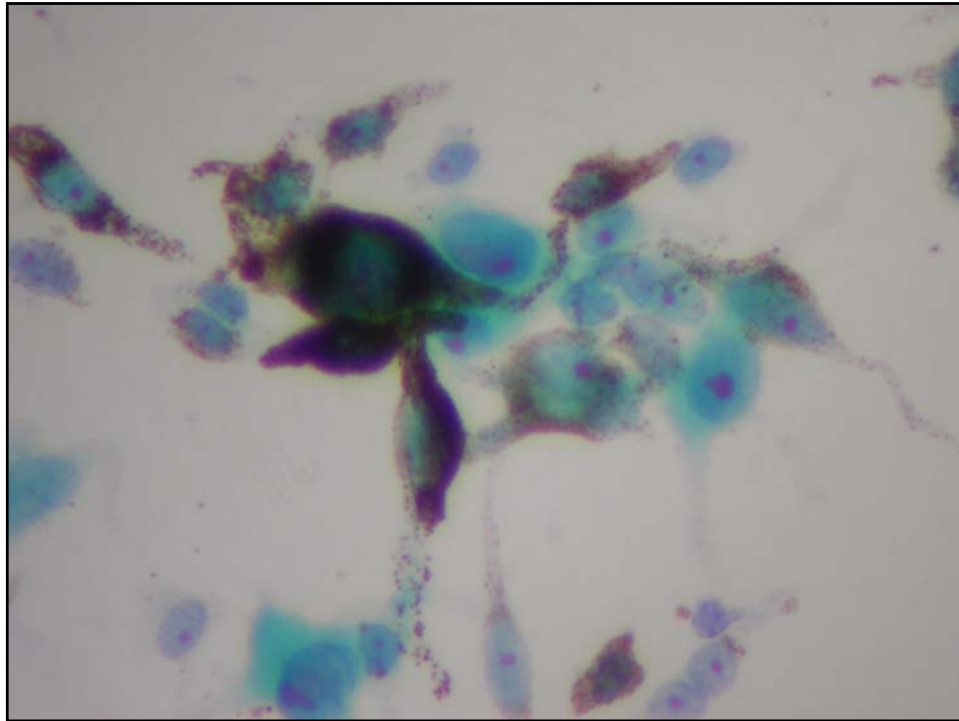






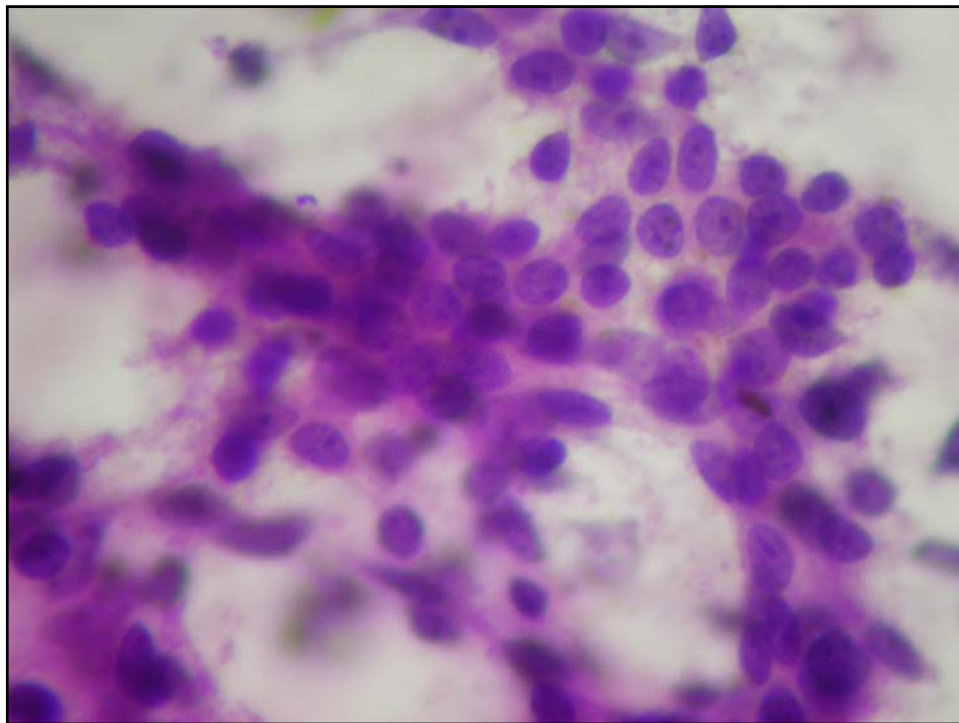
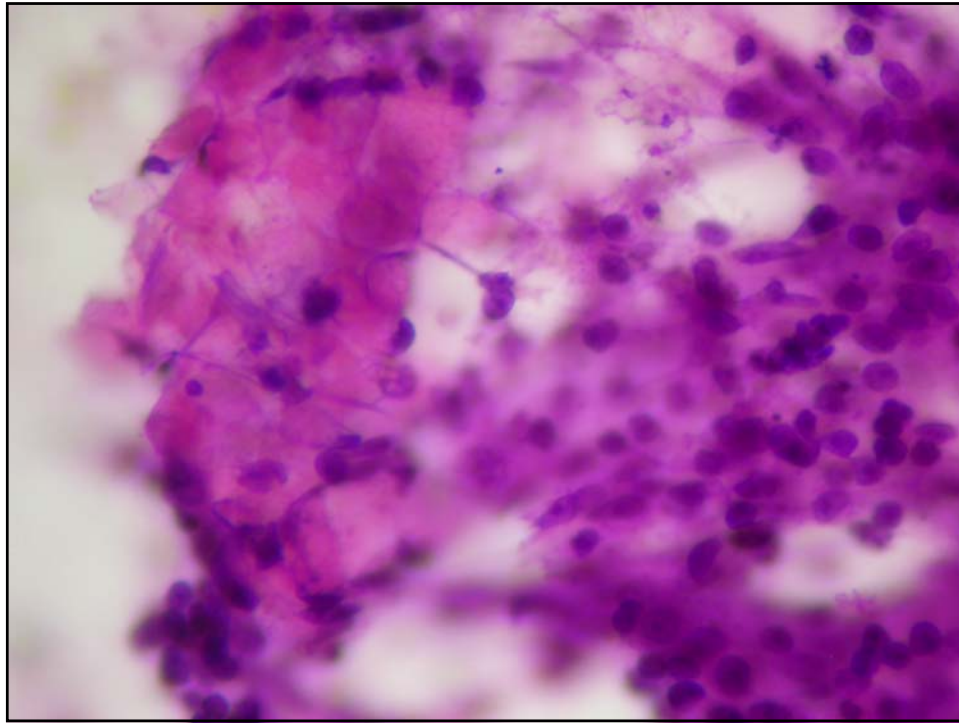


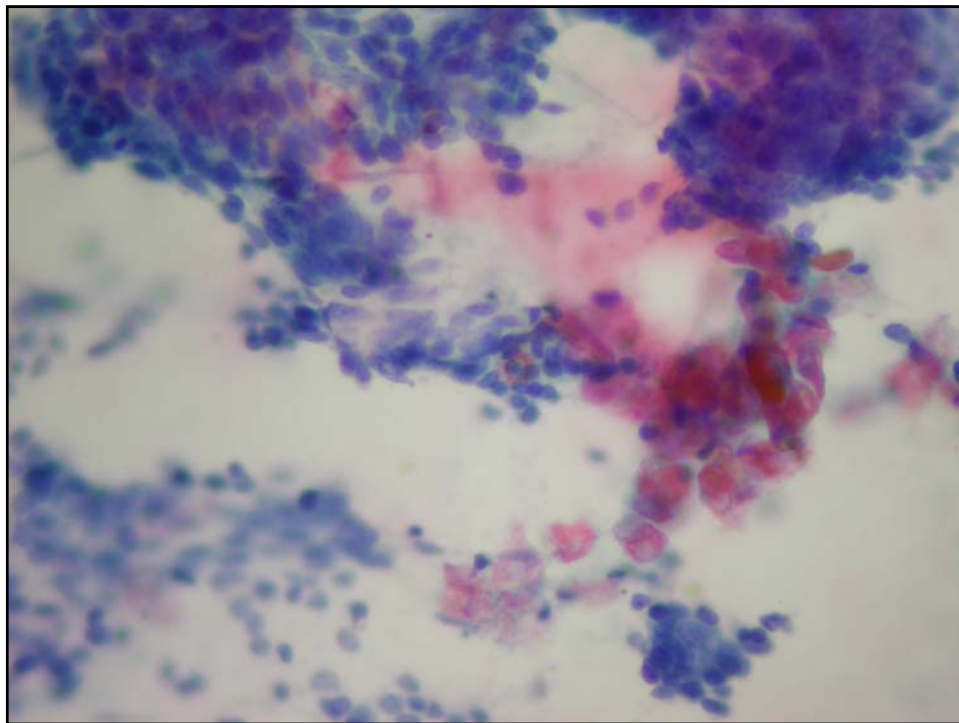
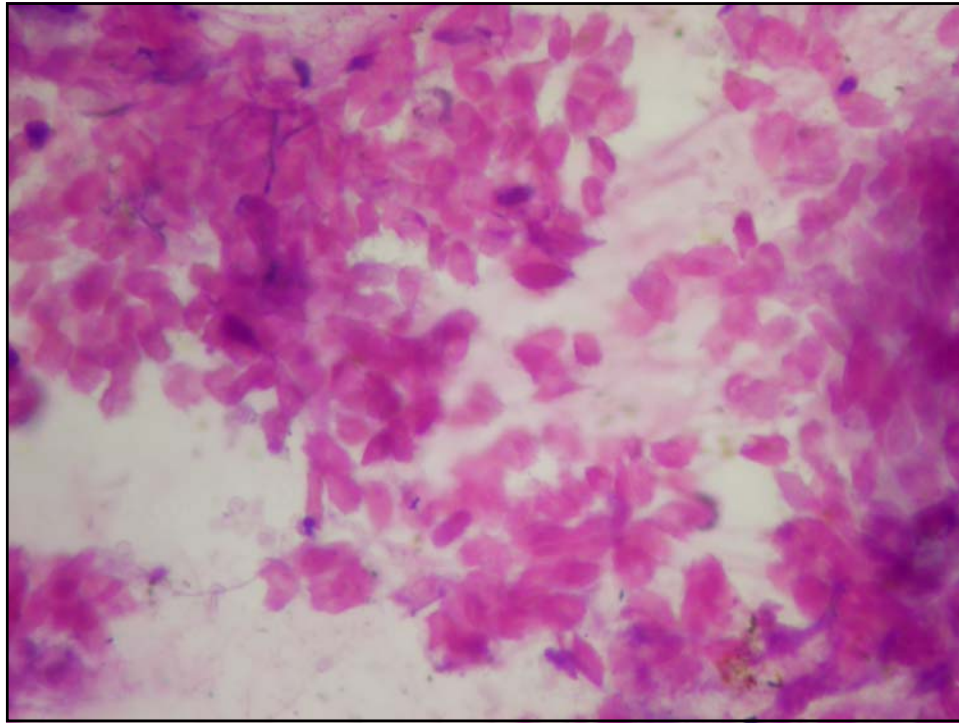


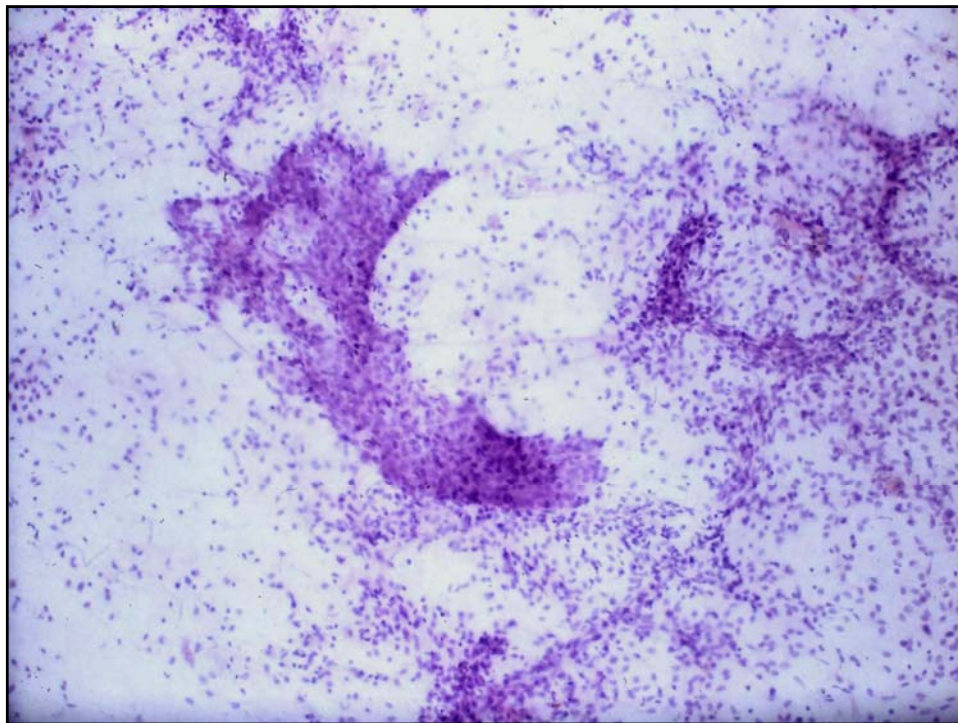
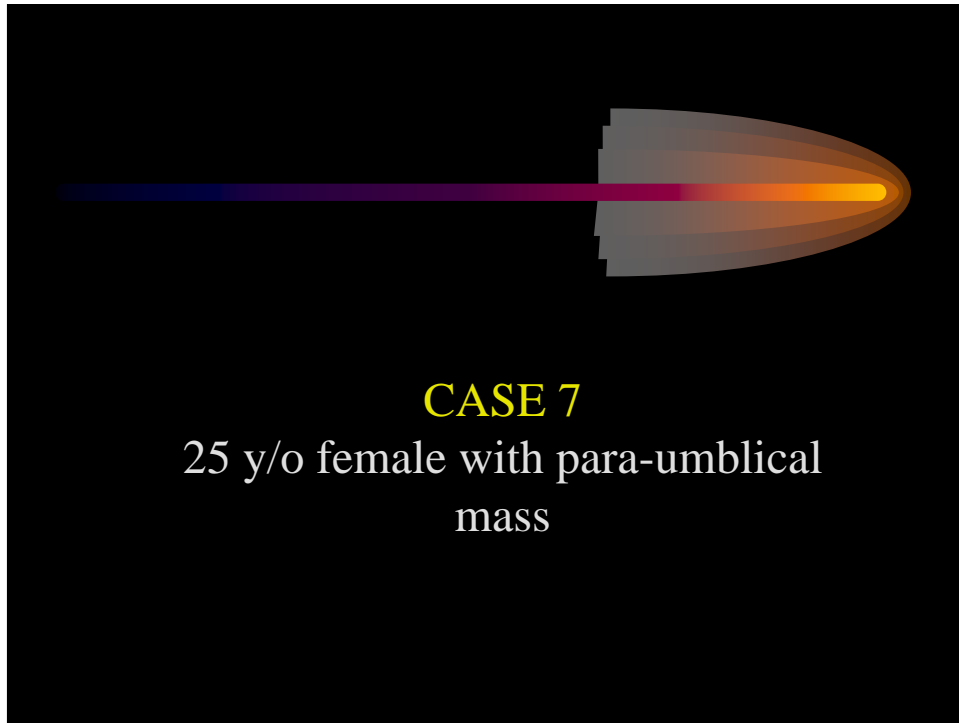


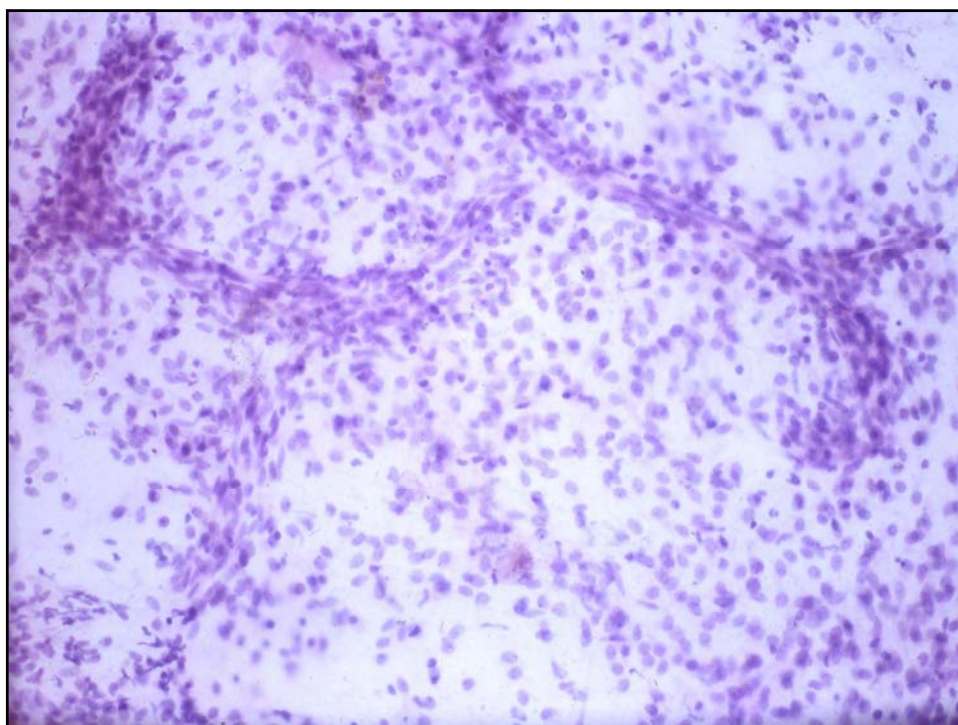
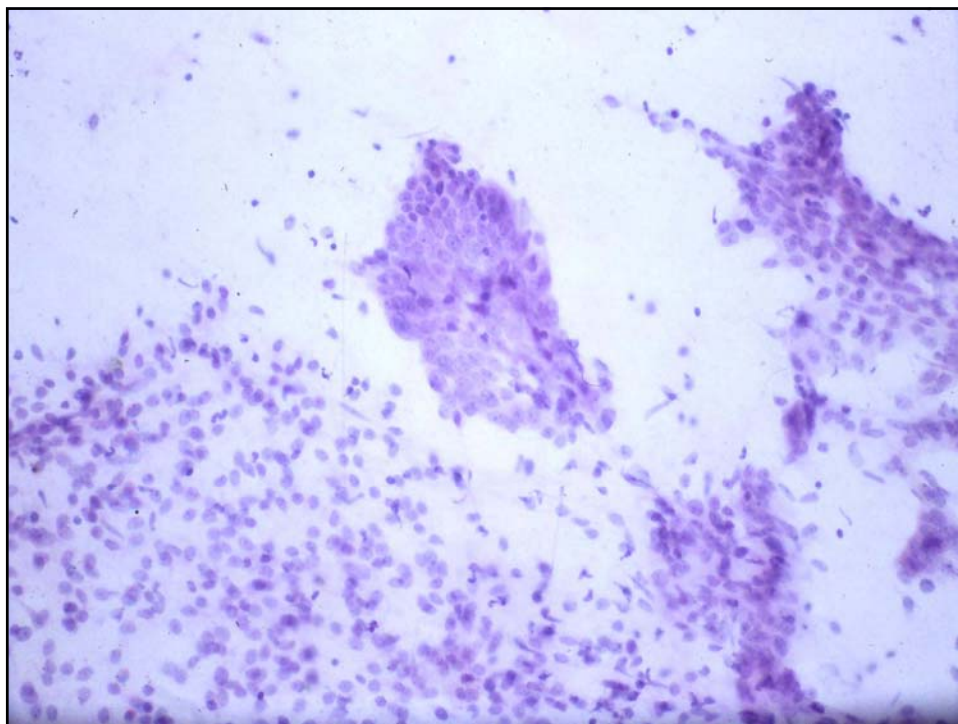
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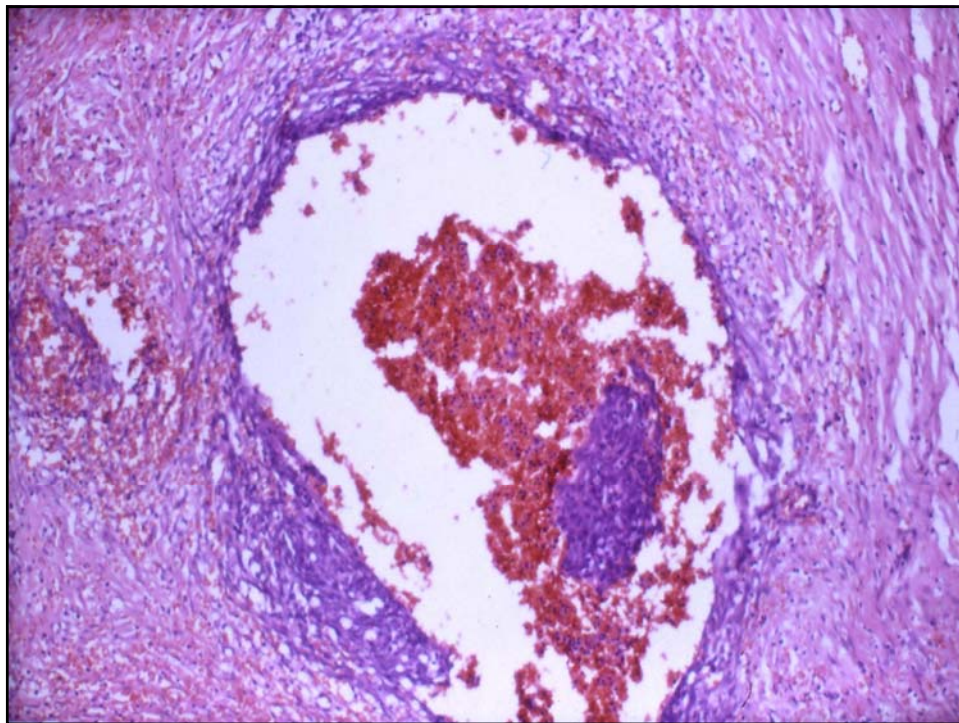
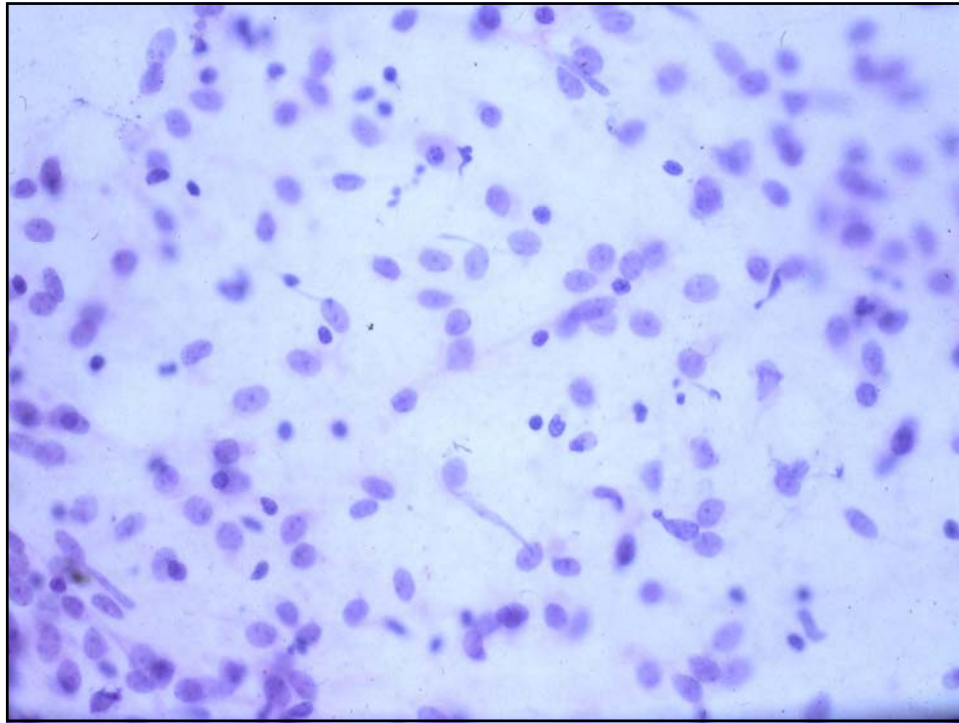
5 y/o male child with upper arm  
mass

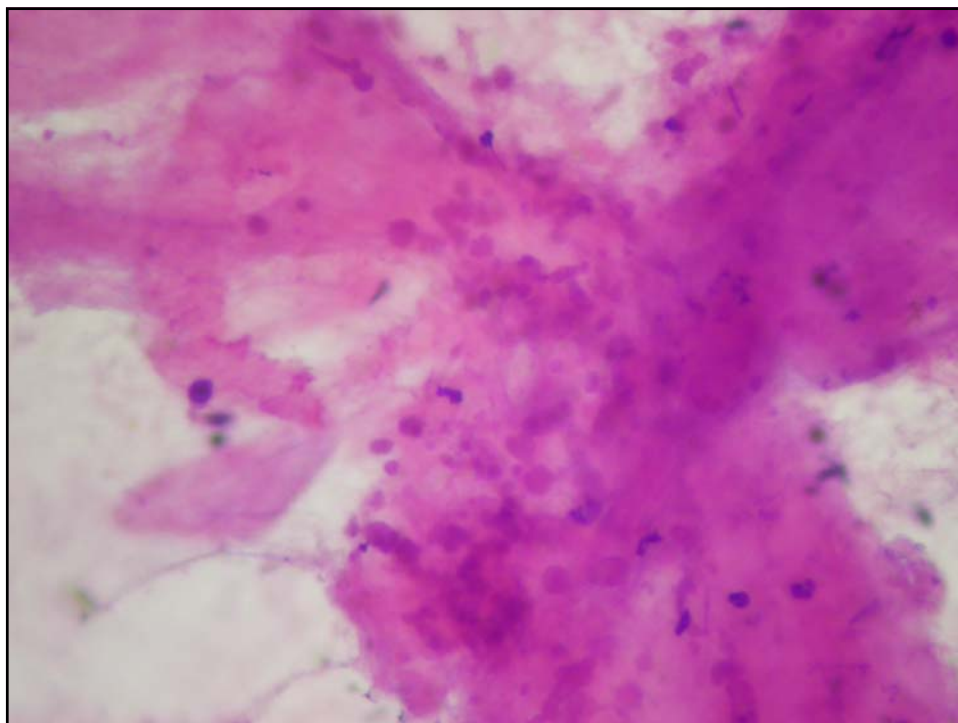
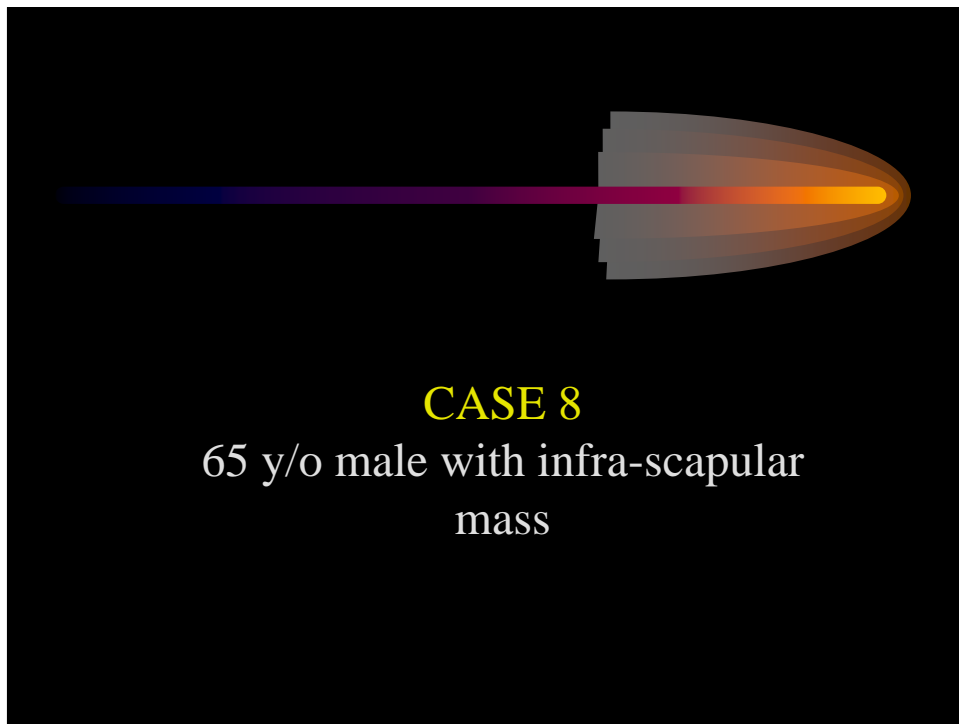


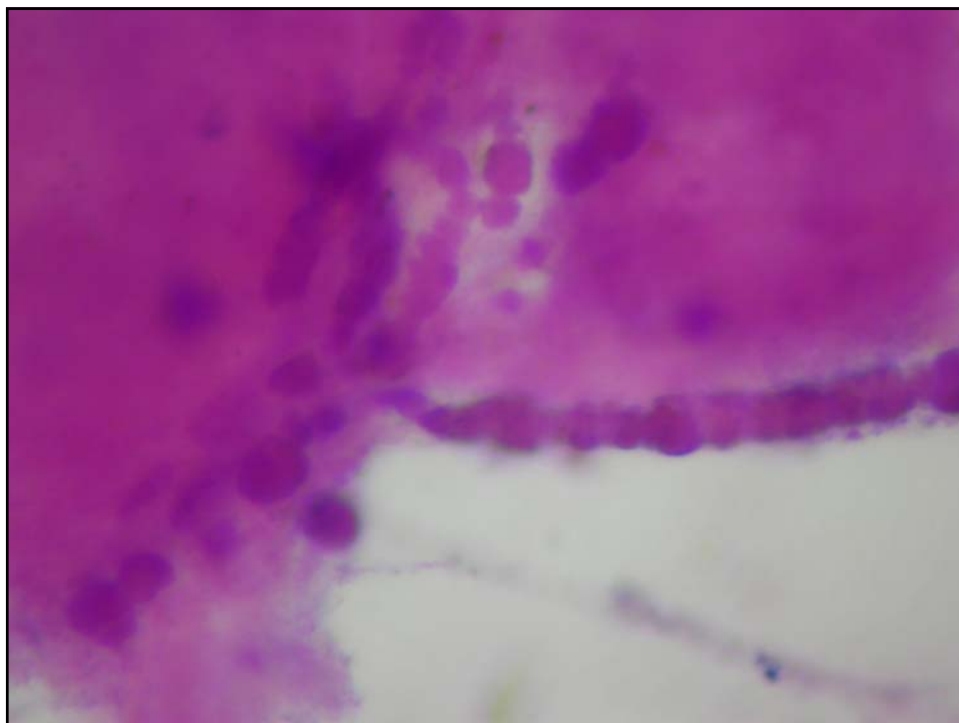
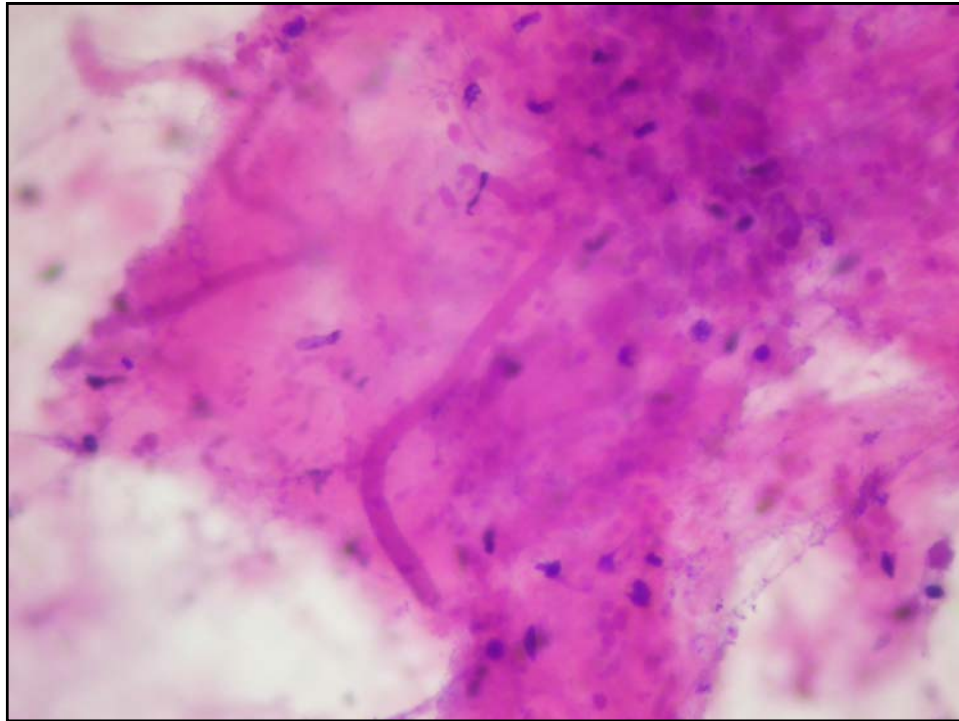




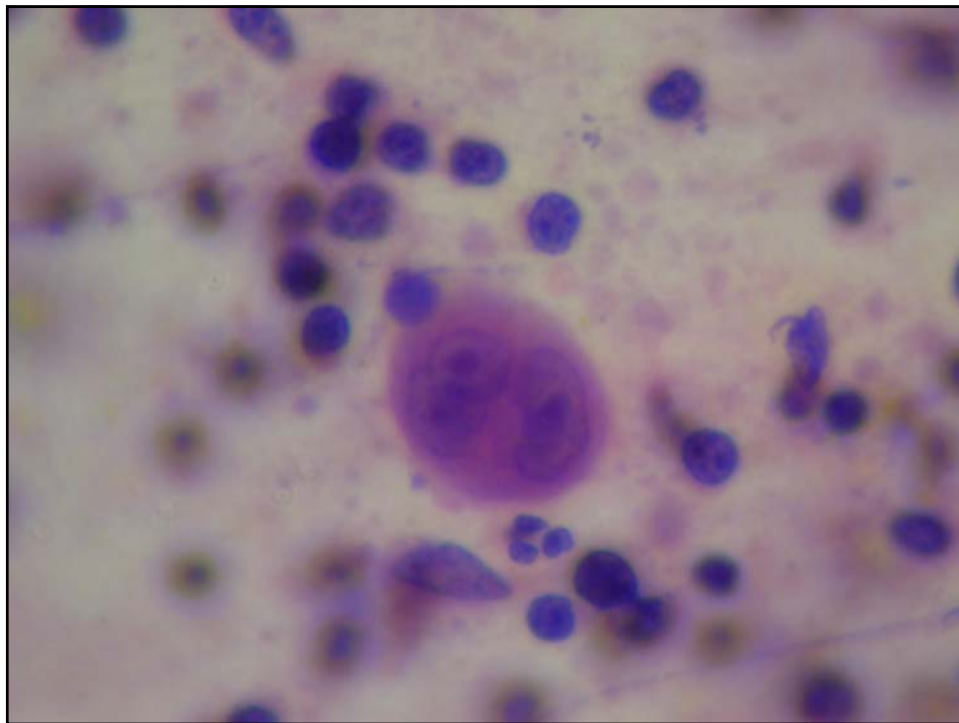
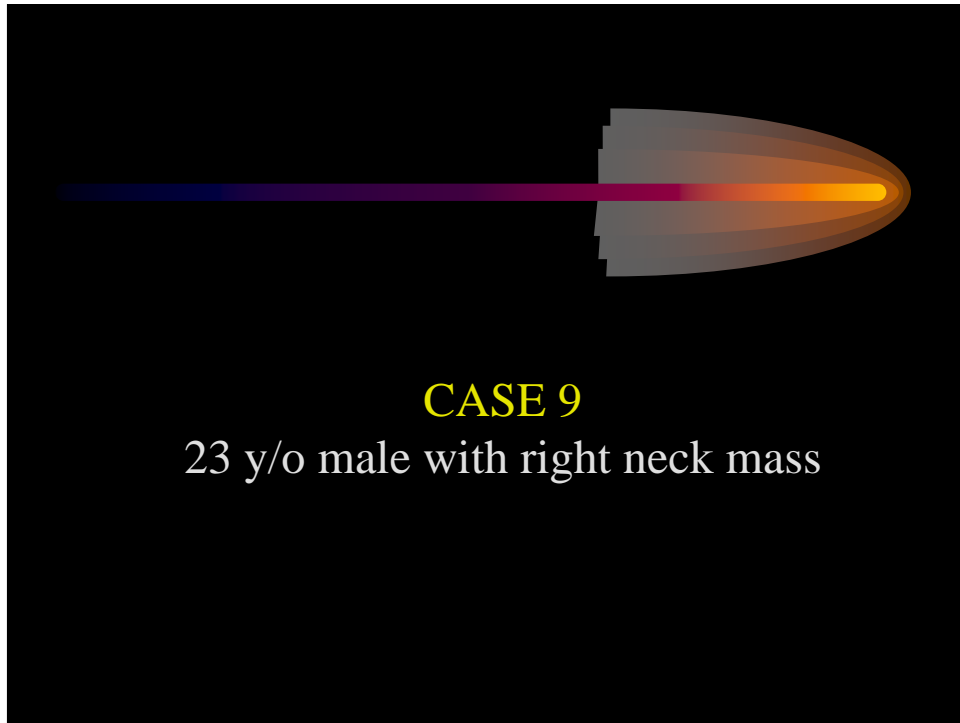


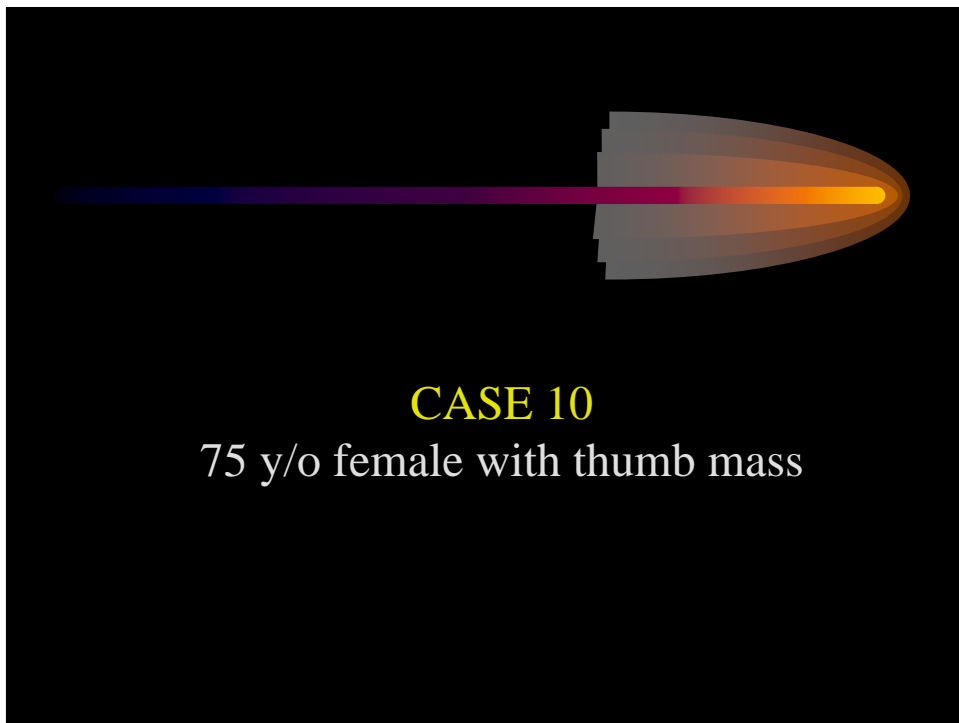
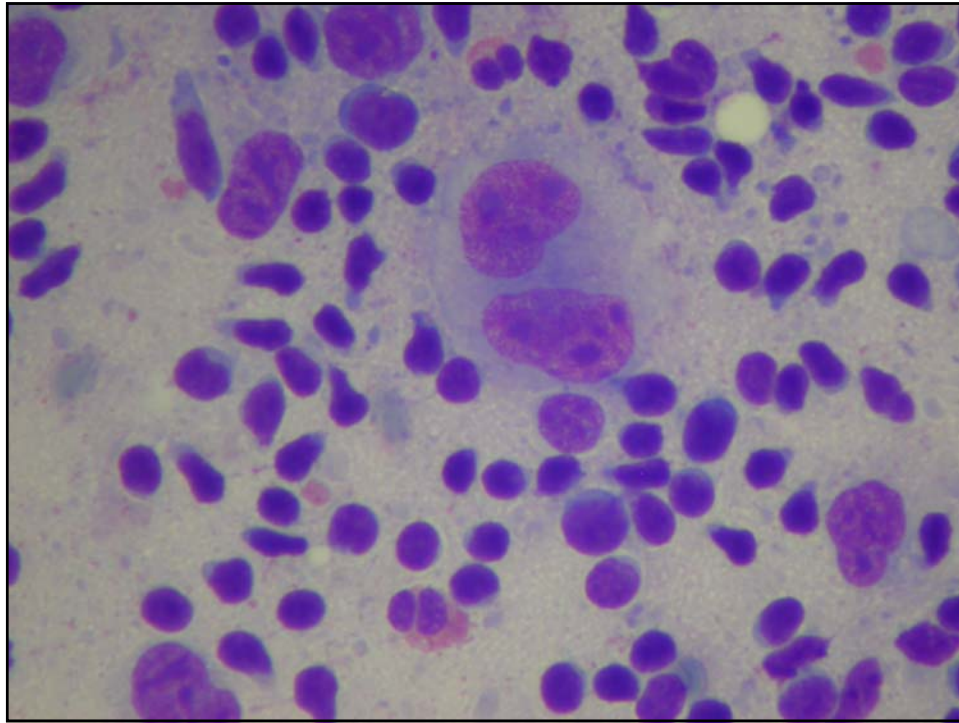






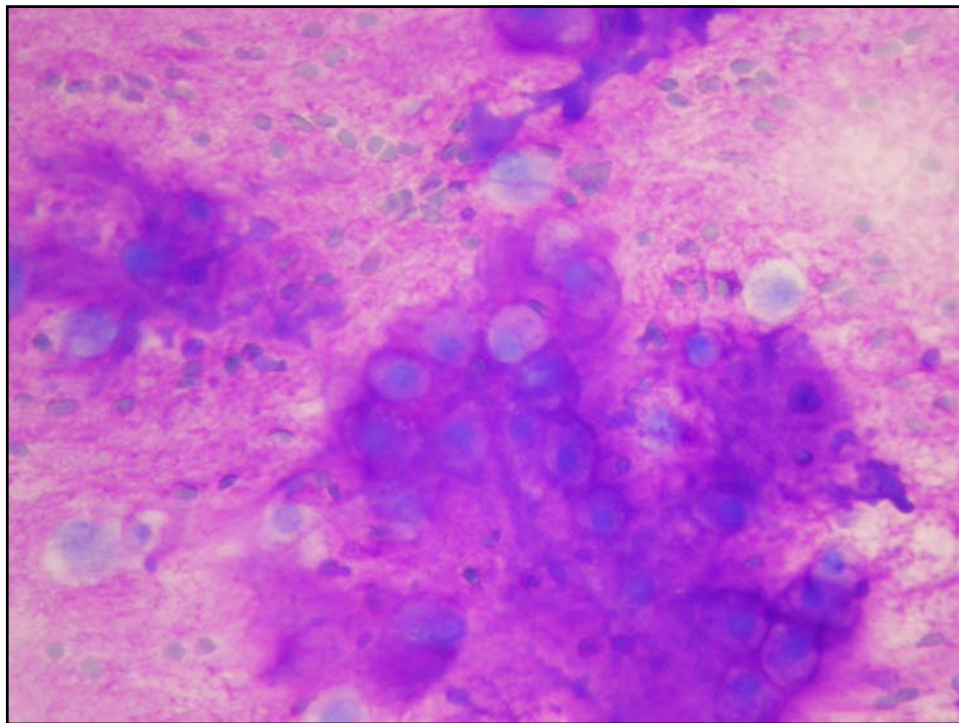
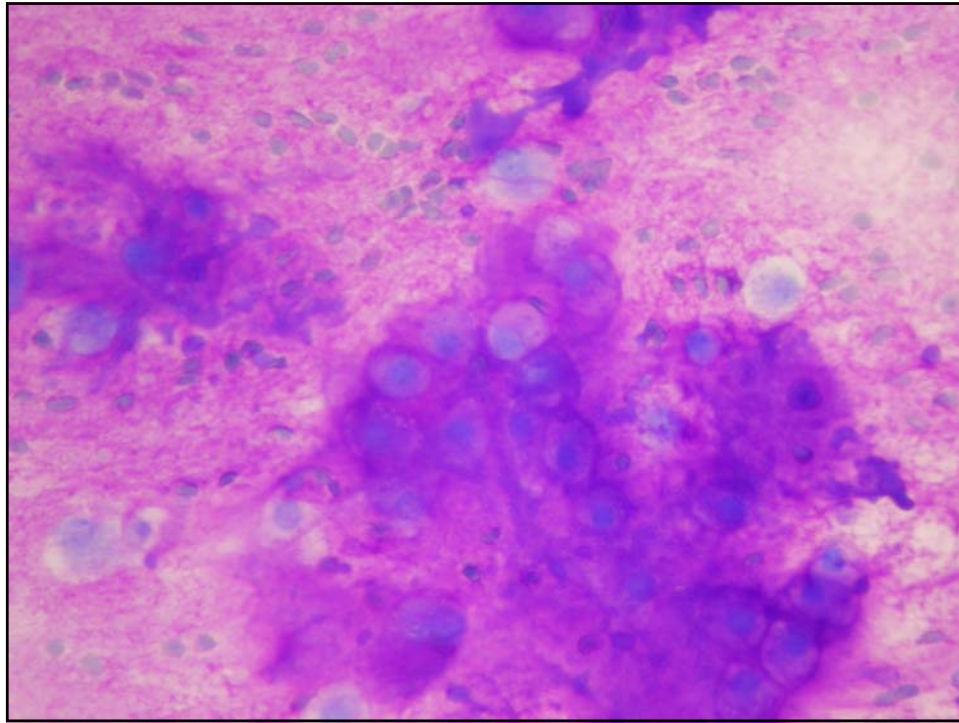


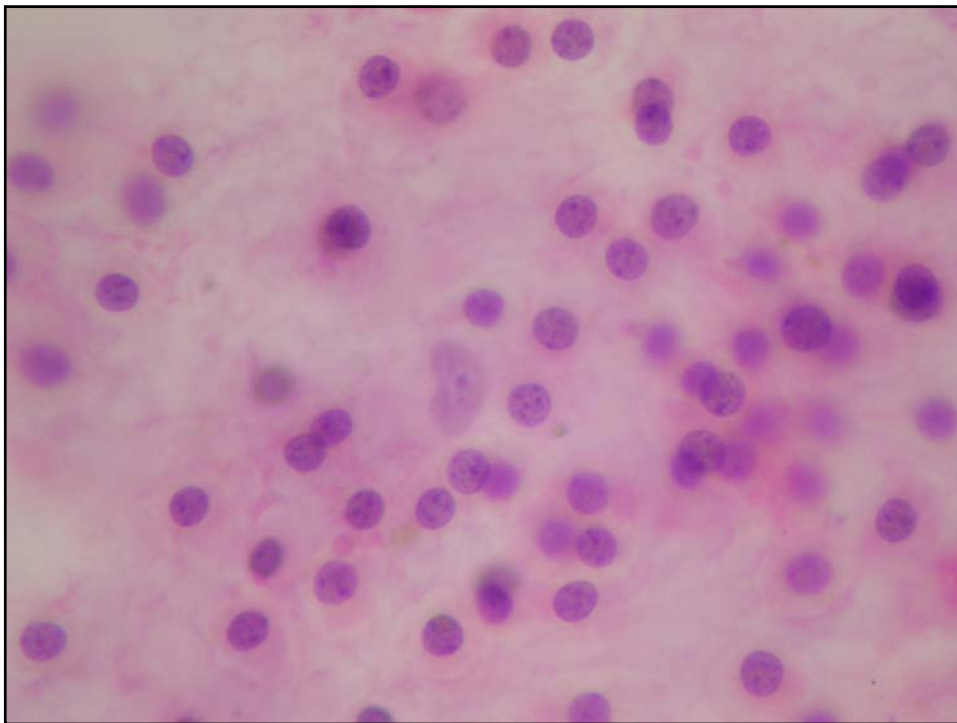
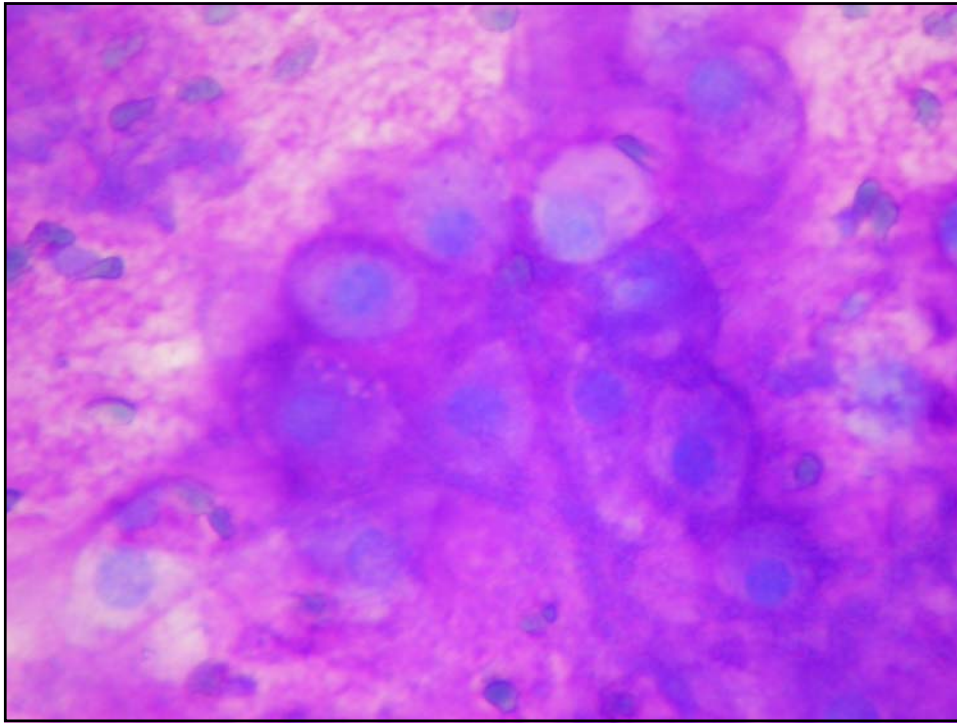



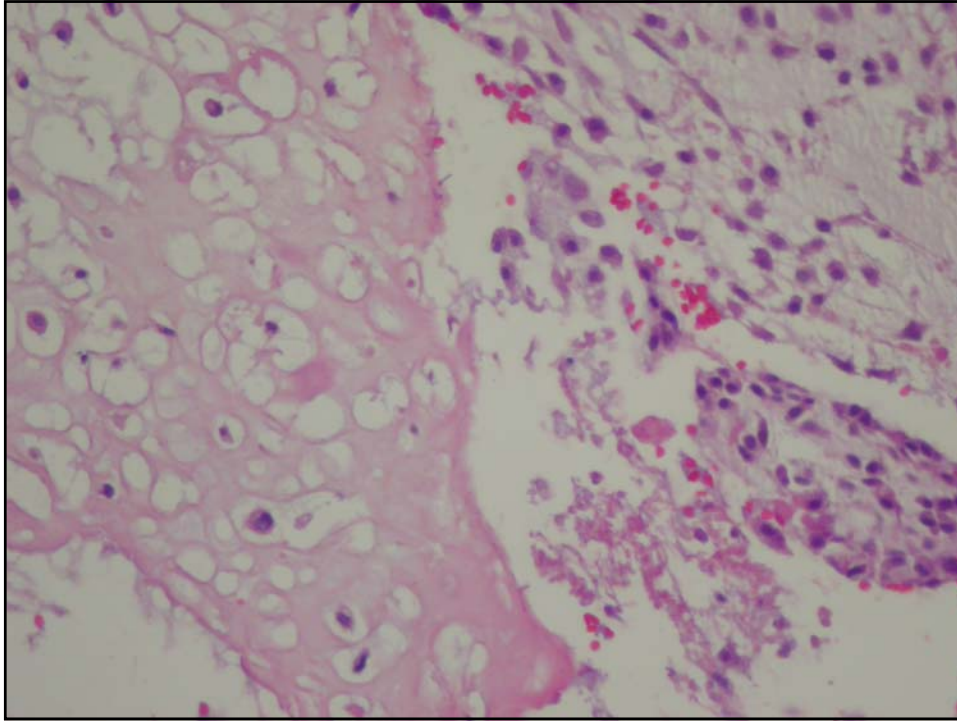


**CASE 10**

75 y/o female with thumb mass







**CASE 11**  
45 y/o female with breast mass

