Schematic approach of FNA diagnosis of metastatic malignancy

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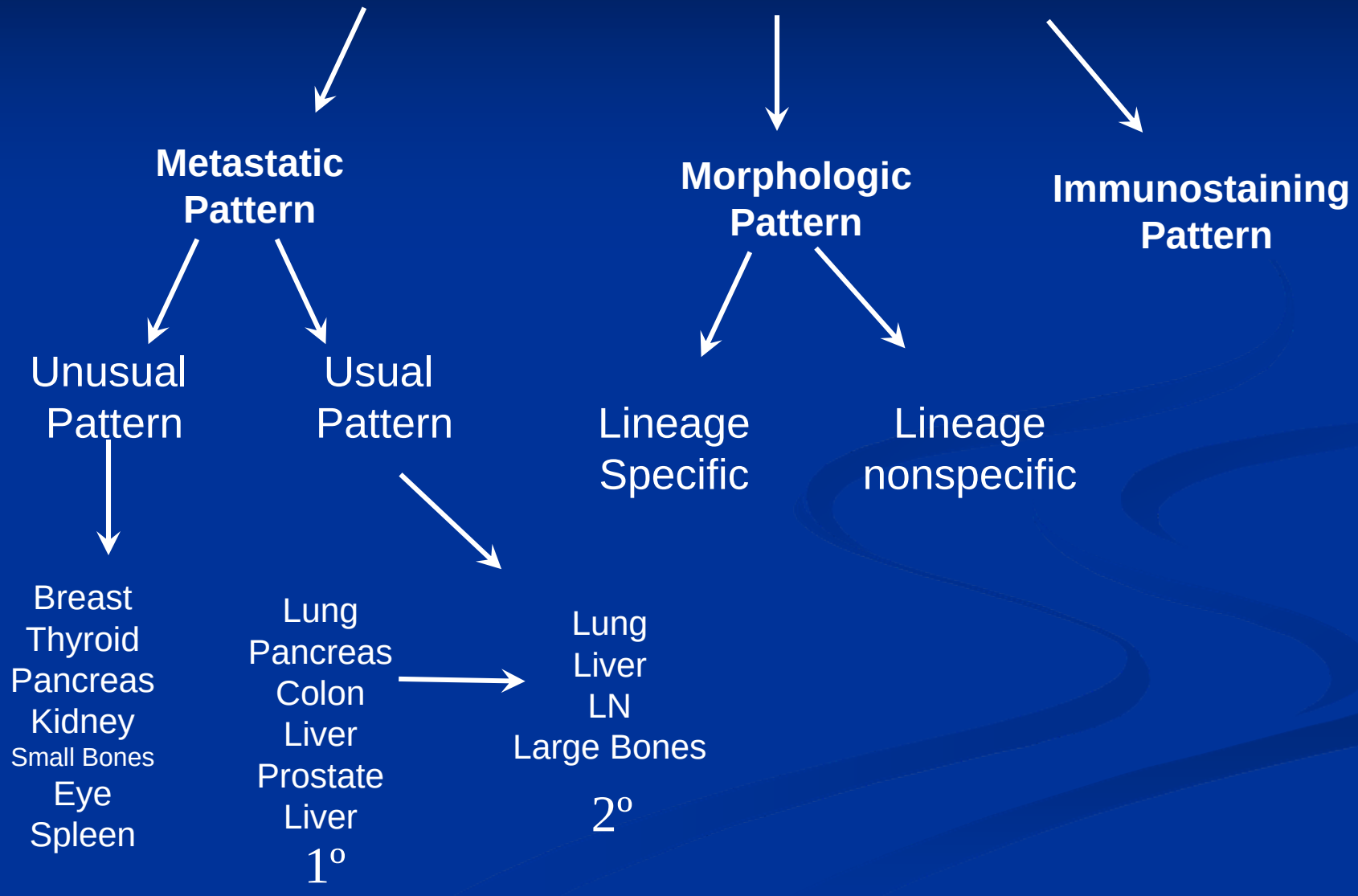
Making Cancer History®

The Role of FNA

- Initial diagnostic tool to evaluate a mass lesion
- Simple, fast, less invasive and cost effective
- Triage for ancillary studies (ICC, FCM, cytogenetics, FISH, molecular study)
- Benign vs. malignant?
- Primary vs. metastatic?
- What is the primary site?

Approach to FNA Diagnosis



Common Metastatic Patterns

Metastatic Site	Probable primary site of malignancy
Lymph nodes:	
Cervical	Head and neck, lung, melanoma, breast
Right supraclavicular	Lung, breast, lymphoma
Left supraclavicular	Lung, breast, lymphoma, cervix, prostate
Axillary	Breast, lung, arm, regional trunk, GI
Inguinal	Melanoma, trunk, leg, vulva, prostate, anorectal, bladder
Lung	Breast, GI (colon, pancreas, stomach), kidney, sarcoma, melanoma, prostate
Large bones	Prostate, breast, lung, kidney, thyroid
Liver	GI (pancreas, colon, stomach), breast, lung, lymphoma, genitourinary, sarcoma, melanoma
Adrenal gland	Lung, breast, kidney, GI (stomach, colon, pancreas), liver, melanoma, lymphoma
Brain	Lung, breast, melanoma, GI
Skin & subcutaneous tissue	Lung, breast, melanoma, head and neck, GI
Salivary glands	H&N, melanoma, lymphoma, lung, kidney

Elsheikh et al Path Case Rev 2001; 6; 161-72, modified

Unusual Metastatic Patterns

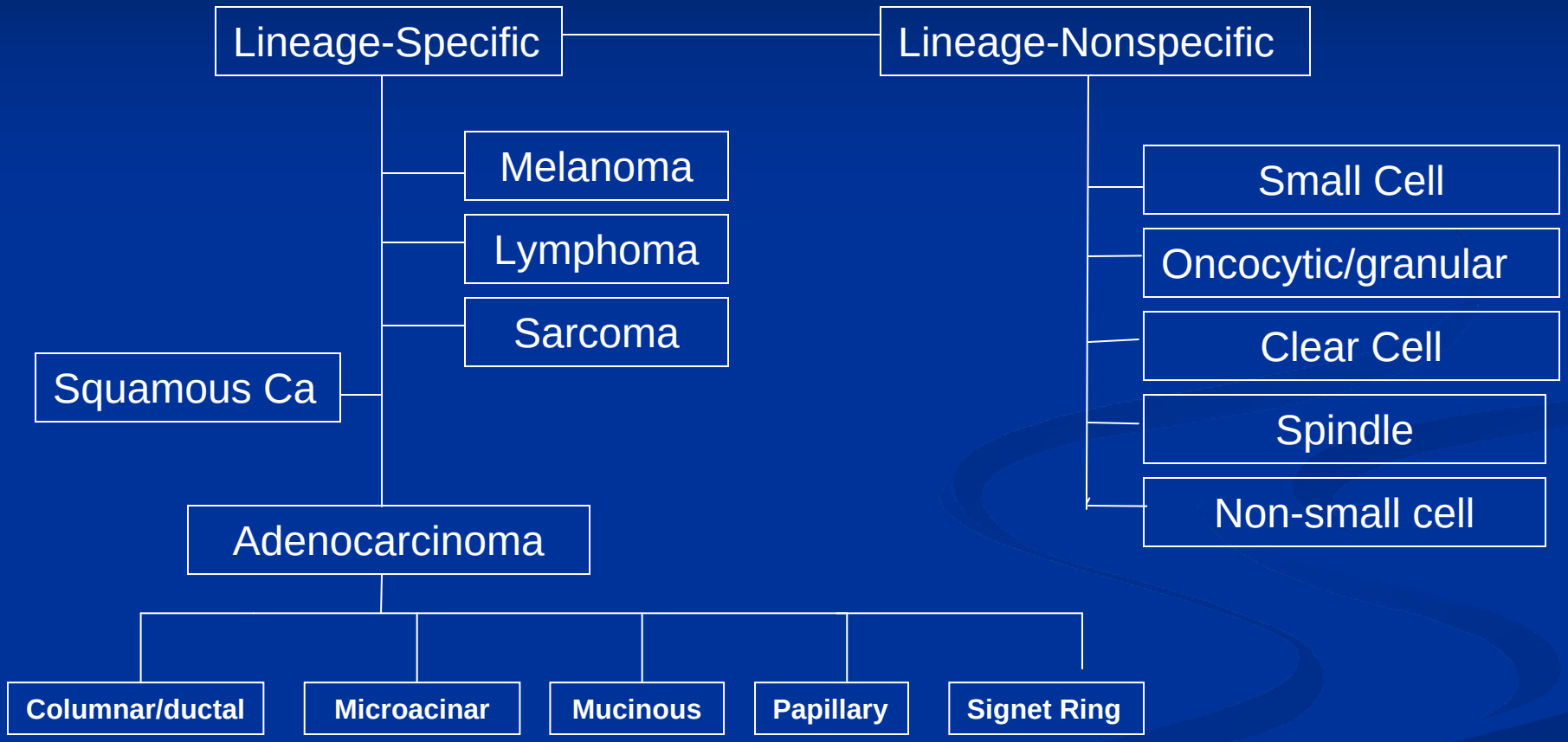
Metastatic Site	Most common primary site of malignancy
Breast:	
Female	Contralateral breast, melanoma, lung, ovary, lymphoma, sarcoma, GI, Genitourinary
Male	Prostate, lymphoma, lung, bladder
Thyroid	Kidney, lung, breast, melanoma
Pancreas	Lung, breast, kidney, lymphoma, liver, GI, melanoma
Kidney	Lung, breast, GI, lymphoma, melanoma
Small bones	Lung, kidney, breast, GI, melanoma
Eye	Melanoma, breast, lung, lymphoma, GI, kidney, prostate
Spleen	Lung, breast, melanoma

Elsheikh et al Path Case Rev 2001; 6; 161-72, modified

Watch out for

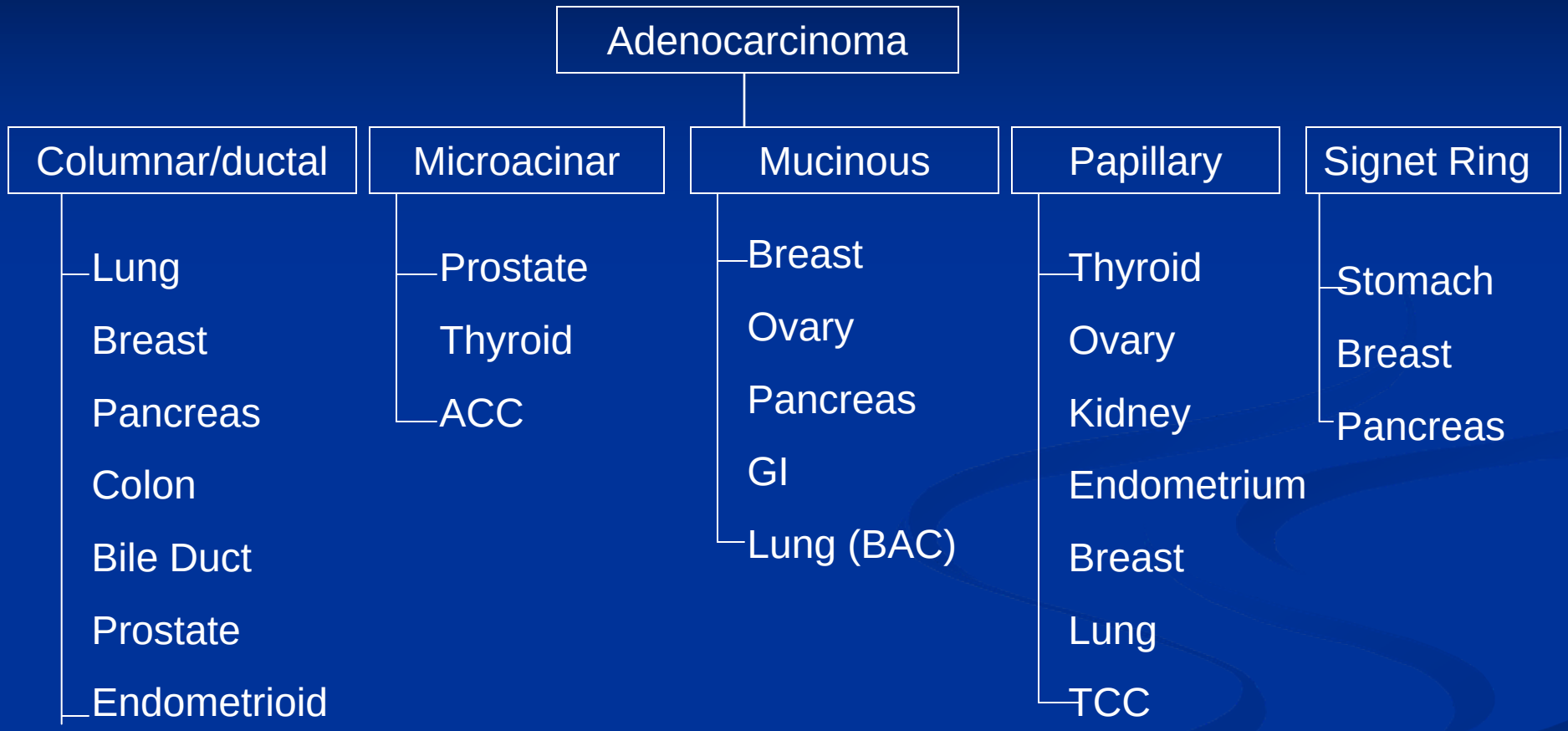
- Unusual **metastatic patterns**
- Unusual **morphologic patterns**

Cytomorpholgic Patterns



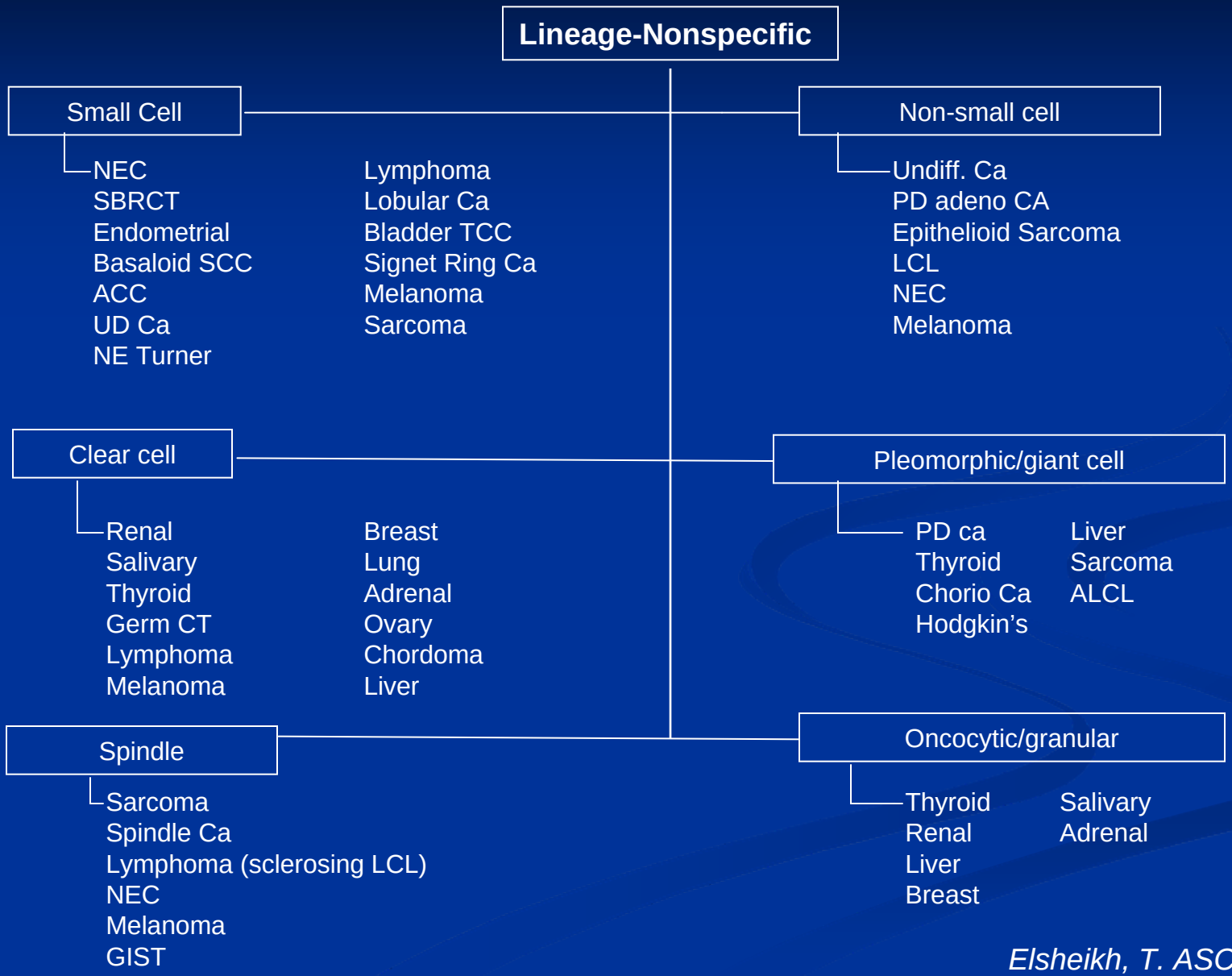
Elsheikh, T. ASCP, modified

Patterns of Adenocarcinoma



Elsheikh, T. ASCP, modified

Patterns of malignancy: Lineage nonspecific

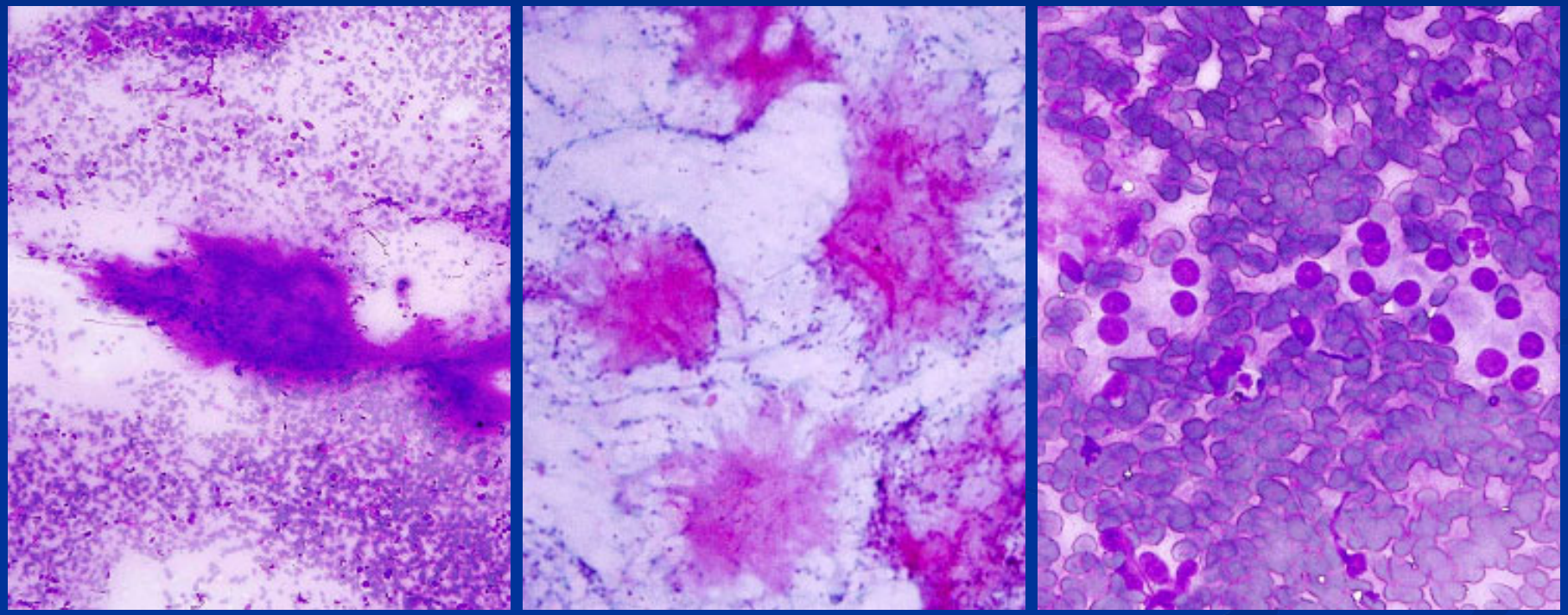


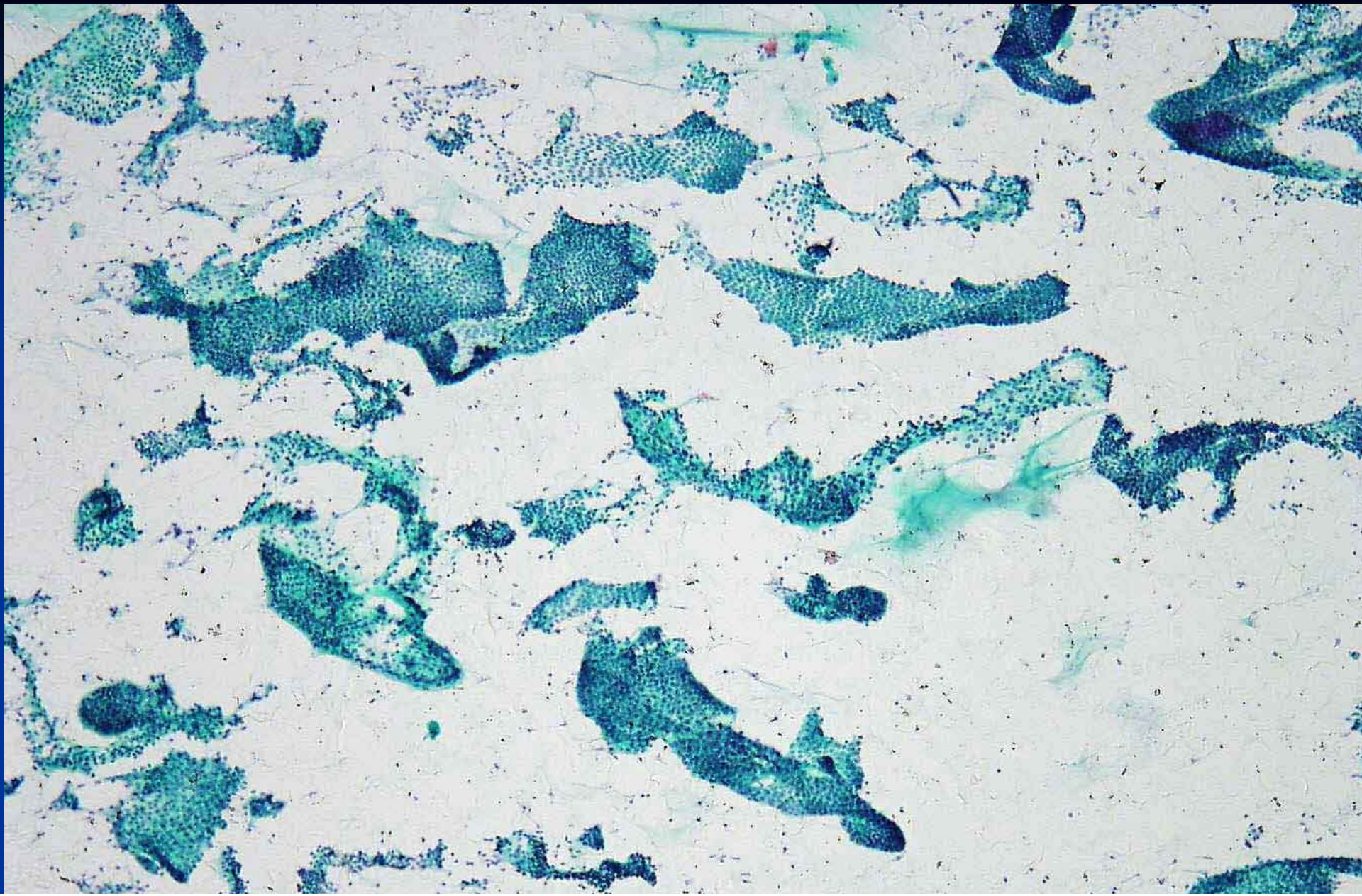
Elsheikh, T. ASCP, modified

New primary?

Sampling Error?

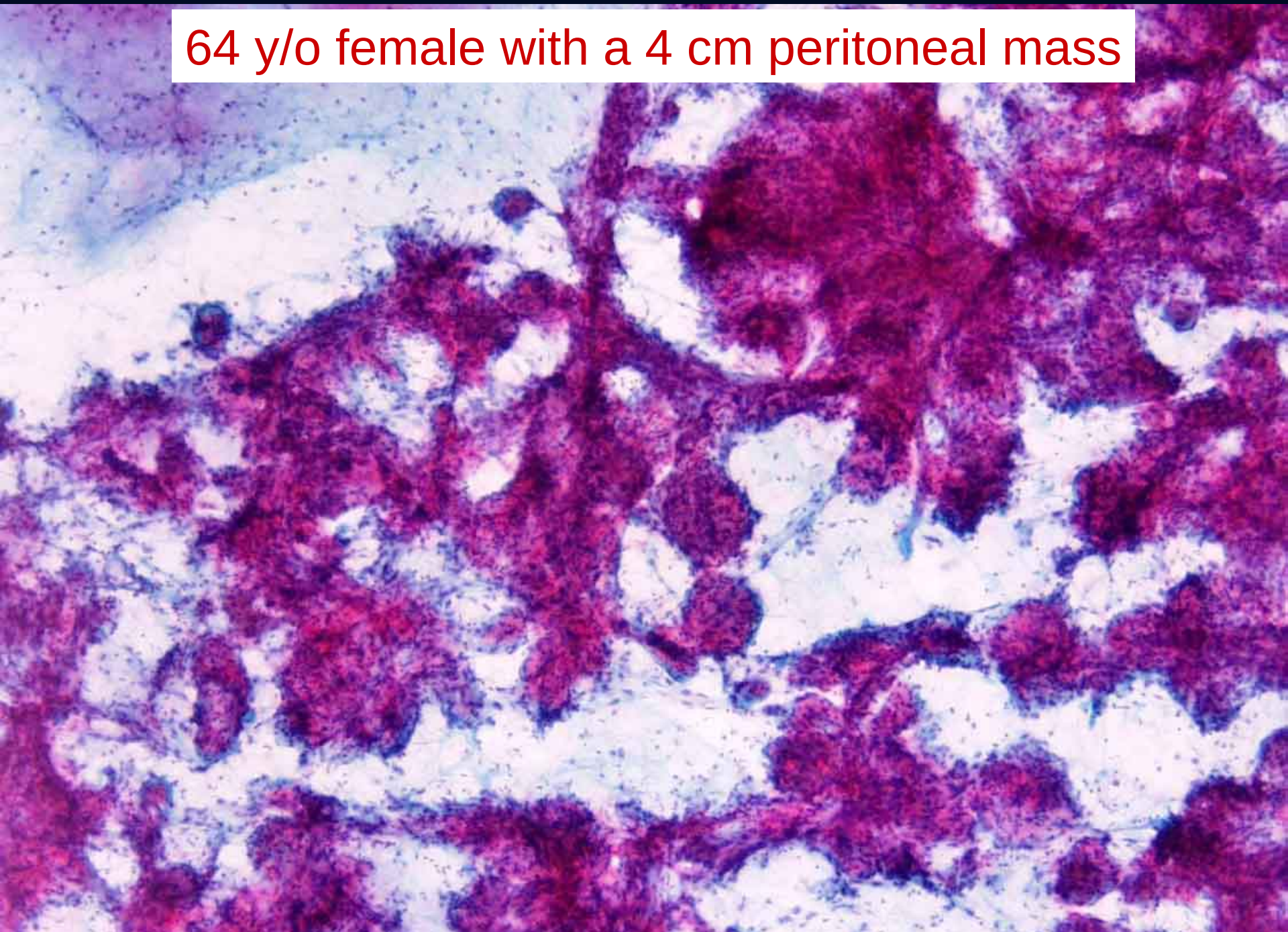
A large thyoid mass in a 57 yo woman with history of breast ca



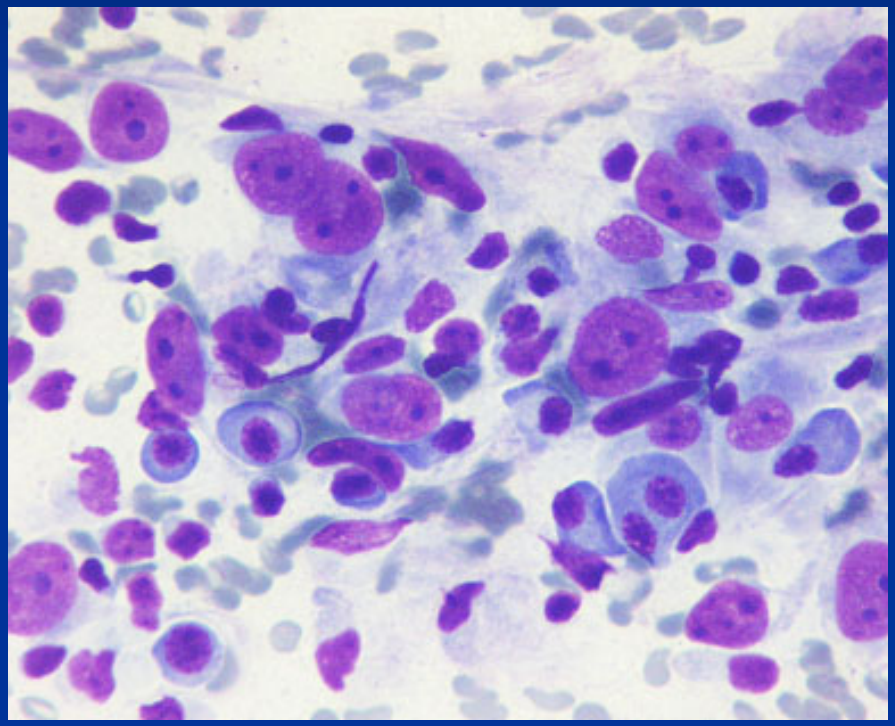


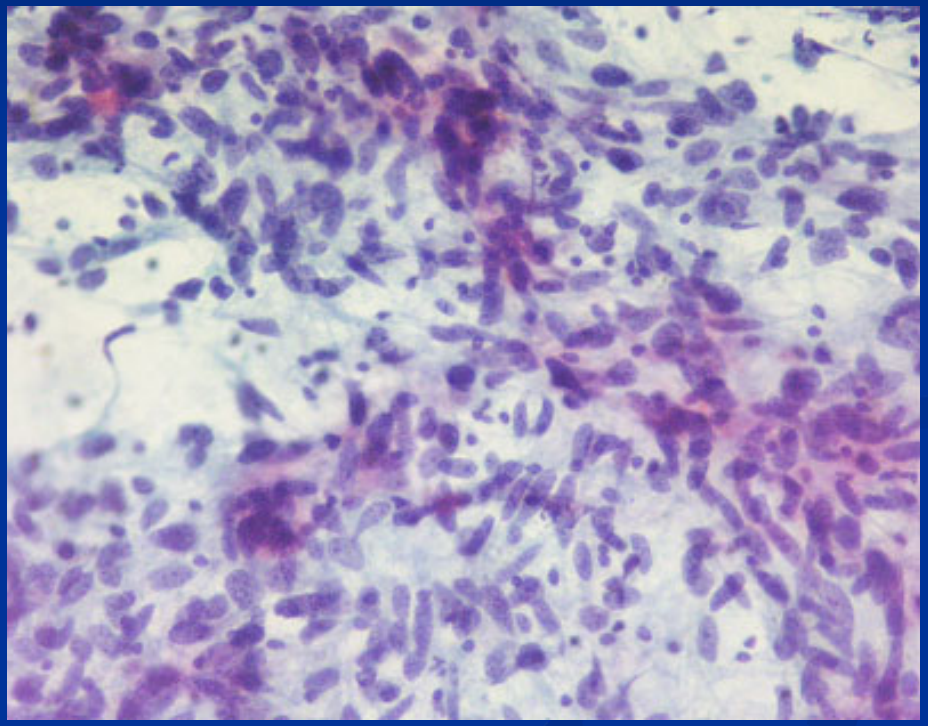
A large pelvic mass in a 85 y/o male without history of malignancy

64 y/o female with a 4 cm peritoneal mass

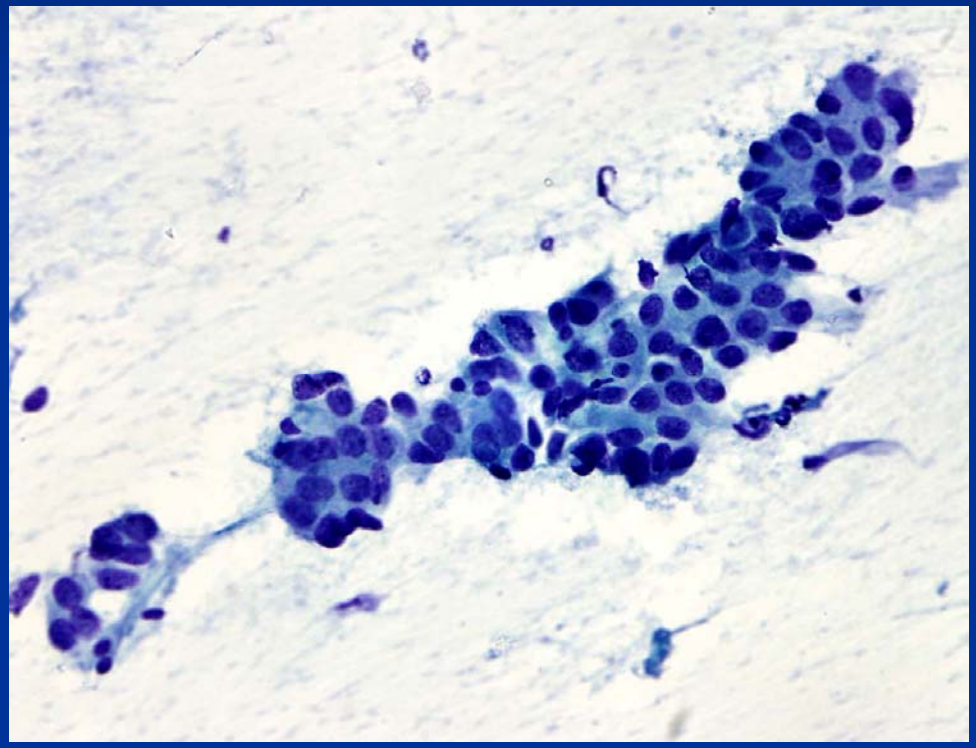


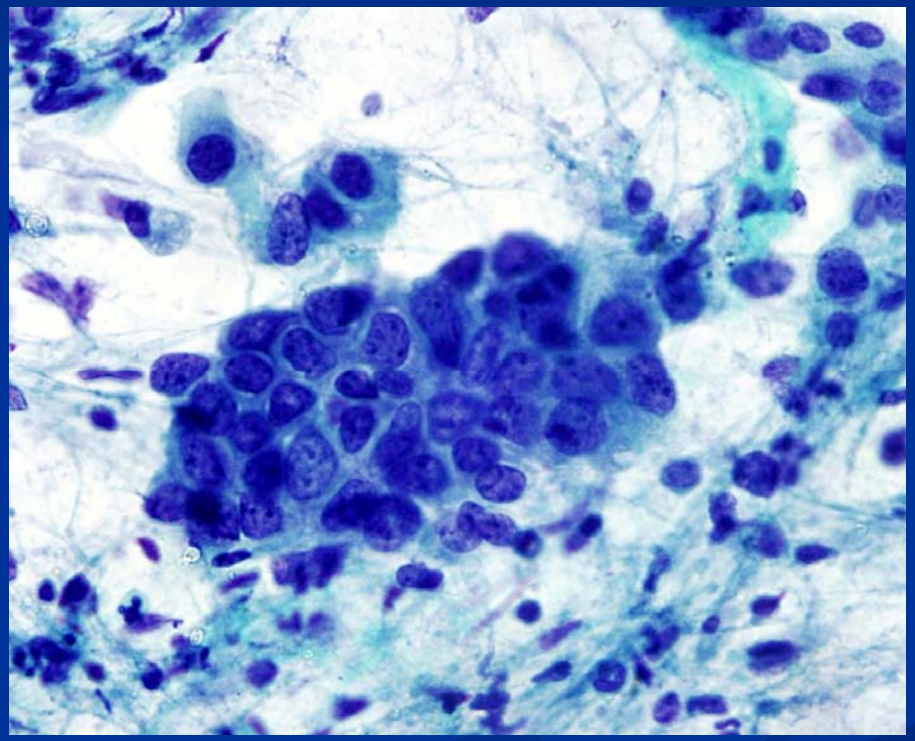
65 y/o female with a 2.0 cm liver nodule





Inguinal nodule from a 38 yo woman with history of melanoma





General Principles in FNA Approach of Metastasis

- “Alien cells” for the site
- Metastatic pattern and morphologic pattern
- Clinical history of previous malignancy
- Radiologic findings
- Review of previous cytology/surgical pathology material
- Ancillary studies in selected cases
- Histology confirmation in unresolved cases before definitive treatment


Thank you